



FUEL REDUCTION PLAN - FINAL

For the Del Cerro Grant Area,
San Diego, California

(including the Rancho Mission Canyon, Marion Bear,
Serra Mesa, Cowles Mountain, and Encanto subareas)

Contract No. 9442-09-W-RFP

FEMA Grant Number: FEMA-1577-DR-CA HMGP 1577-6-2 and
1577-8-3, and FEMA-1585-DR-CA HMGP 1585-9-1

February 18, 2010

Prepared for:

City of San Diego
Park & Recreation Department
Open Space Division
World Trade Center, 4th Floor
1250 Sixth Avenue
San Diego, CA 92101

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard, Suite 200
La Mesa, CA 91941

Contact: Shelby Howard
(619) 462-1515

Prepared in conformance with the City of San Diego Brush Management Guidelines.



**City of San Diego Brush Management Project
Fuel Reduction Plan for the Del Cerro Grant Area**

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
1.0	INTRODUCTION	1
2.0	METHODS.....	1
2.1	Pre-Fuel Reduction Data Collection	1
2.2	Coastal California Gnatcatcher Surveys	1
2.3	Rare Plant Surveys and Nesting Bird Surveys	2
2.4	Nomenclature.....	2
3.0	PRE-FUEL REDUCTION SITE CONDITIONS/CONSTRAINTS.....	2
3.1	Vegetation Communities	2
3.1.1	Rancho Mission Canyon	2
3.1.2	Marian Bear.....	3
3.1.3	Serra Mesa	3
3.1.4	Cowles Mountain.....	3
3.1.5	Encanto	4
3.2	Sensitive Plant Species	4
3.2.1	Rancho Mission Canyon.....	4
3.2.2	Marian Bear.....	5
3.2.3	Serra Mesa	5
3.2.4	Cowles Mountain.....	6
3.2.5	Encanto	6
3.3	Coastal California Gnatcatcher.....	6
3.3.1	Rancho Mission Canyon	6
3.3.2	Marian Bear.....	7
3.3.3	Serra Mesa	7
3.3.4	Cowles Mountain.....	7
3.3.5	Encanto	7
3.4	Nesting Birds and Raptors	7
3.5	Brush Management Compliance	7
3.6	Proposed Access Points	8
4.0	FUEL REDUCTION EXECUTION/MONITORING.....	8
5.0	FUEL REDUCTION RECOMMENDATIONS.....	9
6.0	DELIVERABLES.....	9
7.0	REFERENCES.....	10

LIST OF APPENDICES

<u>Letter</u>	<u>Title</u>
A	Vegetation Communities in the Del Cerro Area
B	Sample Pre-thinning Photos
C	Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

LIST OF FIGURES

<u>Number</u>	<u>Title</u>	<u>Follows Page</u>
1	Regional Location Map	1
2a	Project Location Map (Rancho Mission Canyon)	1
2b	Project Location Map (Marian Bear).....	1
2c	Project Location Map (Serra Mesa)	1
2d	Project Location Map (Cowles Mountain).....	1
2e	Project Location Map (Encanto)	1
3a	Vegetation (Rancho Mission Canyon).....	2
3b	Vegetation (Marian Bear).....	2
3c	Vegetation (Serra Mesa)	2
3d	Vegetation (Cowles Mountain).....	2
3e	Vegetation (Encanto)	2
4a	Sensitive Resources (Rancho Mission Canyon).....	2
4b	Sensitive Resources (Marian Bear)	2
4c	Sensitive Resources (Serra Mesa).....	2
4d	Sensitive Resources (Cowles Mountain).....	2
4e	Sensitive Resources (Encanto).....	2
5a	Brush Management Compliance and Proposed Access (Rancho Mission Canyon)	2
5b	Brush Management Compliance and Proposed Access (Marian Bear).....	2
5c	Brush Management Compliance and Proposed Access (Serra Mesa)	2
5d	Brush Management Compliance and Proposed Access (Cowles Mountain).....	2
5e	Brush Management Compliance and Proposed Access (Encanto)	2
6	Fuel Reduction Diagram	9

LIST OF TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Vegetation Communities within the Rancho Mission Canyon Fuel Reduction Area.....	2
2	Vegetation Communities within the Marian Bear Fuel Reduction Area	3
3	Vegetation Communities within the Serra Mesa Fuel Reduction Area.....	3
4	Vegetation Communities within the Cowles Mountain Fuel Reduction Area.....	5
5	Vegetation Communities within the Encanto Fuel Reduction Area.....	5

1.0 INTRODUCTION

The City of San Diego Open Space Division, under three awarded FEMA grants, is carrying out brush management covering City owned land in the areas of Carmel Valley (~77.9 acres of urban-wild land interface [UWI]), Scripps Ranch (~166.22 acres of UWI), and Del Cerro (~97.96 acres of UWI) – totaling approximately 342 acres. This fuel reduction plan is prepared for the Del Cerro area and presents pre-fuel reduction site conditions, identifies sensitive resources for avoidance/reduced impacts, and outlines recommendations for implementing fuel reduction along the length of the project area. Recommendations made herein are in accordance with Section 142.0412 of the San Diego Municipal Code (SDMC), the Fire Prevention Bureau Policy B-08-01, and the City of San Diego Fire Safety and Brush Management Guide.

The Del Cerro grant covers fuel reduction areas in 5 general areas of the City of San Diego: Rancho Mission Canyon, the Marian Bear community, Serra Mesa, adjacent to Cowles Mountain, and Encanto (Figures 1 and 2a through 2e).

The goal of this plan is to present pre-fuel reduction site conditions for future comparison with post-fuel reduction conditions, document any rare plants/sensitive species observed during pre-thinning site surveys, and recommend an appropriate course of action to achieve compliance with the City's brush management regulations.

2.0 METHODS

2.1 PRE-FUEL REDUCTION DATA COLLECTION

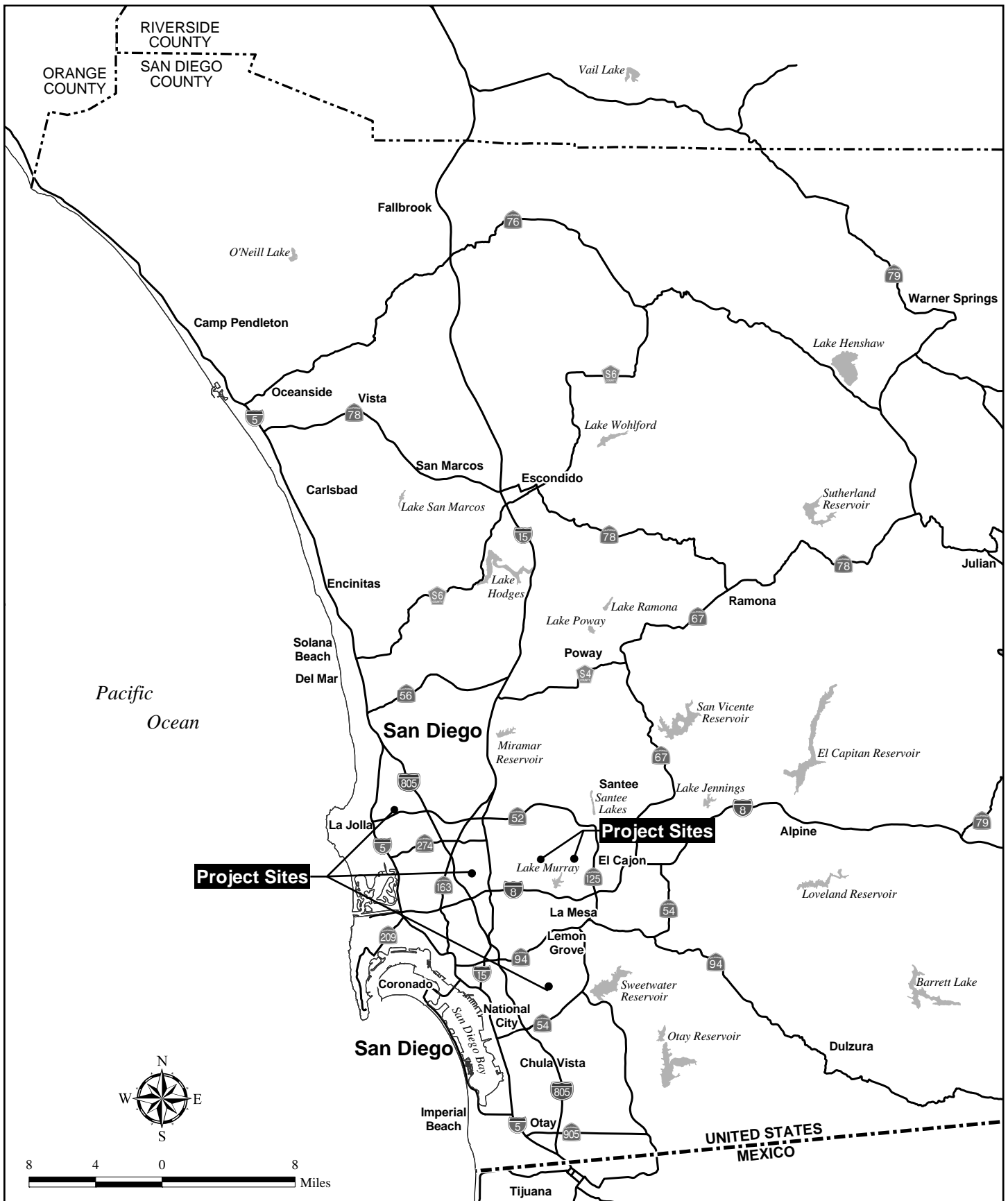
HELIX Environmental Planning, Inc. (HELIX) biologists collected the pre-fuel reduction data in order to document existing conditions, compliance with City brush management regulations (City 2008a and 2008b), and to assess wildfire hazard/compliance. HELIX biologists Dale Ritenour and Shelby Howard collected data approximately every 200 feet along the length of the project area to document pre-fuel reduction site conditions. Data collection included taking photographs in two different directions, recording the compass heading of each photograph (to the nearest 5 degrees), using a Global Positioning System (GPS) with submeter accuracy to document the data collection location, hammering a nail in the ground with a pink feather attached to mark the data collection location, noting access points on an aerial photograph, and identifying potential encroachments by adjacent landowners, and identifying hazardous fuel load.

Data collection also consisted of identifying potential coastal California gnatcatcher (*Poliophtila californica californica*; CAGN) habitat, mapping the vegetation communities in accordance with the City's Biological Guidelines (City 2004), and qualitatively assessing brush management compliance of the polygons identified within the Del Cerro fuel reduction area, in accordance with the methodology described in HELIX's technical proposal for the project (HELIX 2008).

2.2 COASTAL CALIFORNIA GNATCATCHER SURVEYS

If fuel reduction activities will occur during the CAGN breeding season (March 1 to August 15), HELIX will conduct focused surveys for CAGN. At the time this plan was prepared, HELIX has not conducted CAGN surveys for any of the Del Cerro work areas.

HELIX



E:\ArcGIS\SD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig1_Regional.mxd -JP

Regional Location Map

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - DEL CERRO

Figure 1

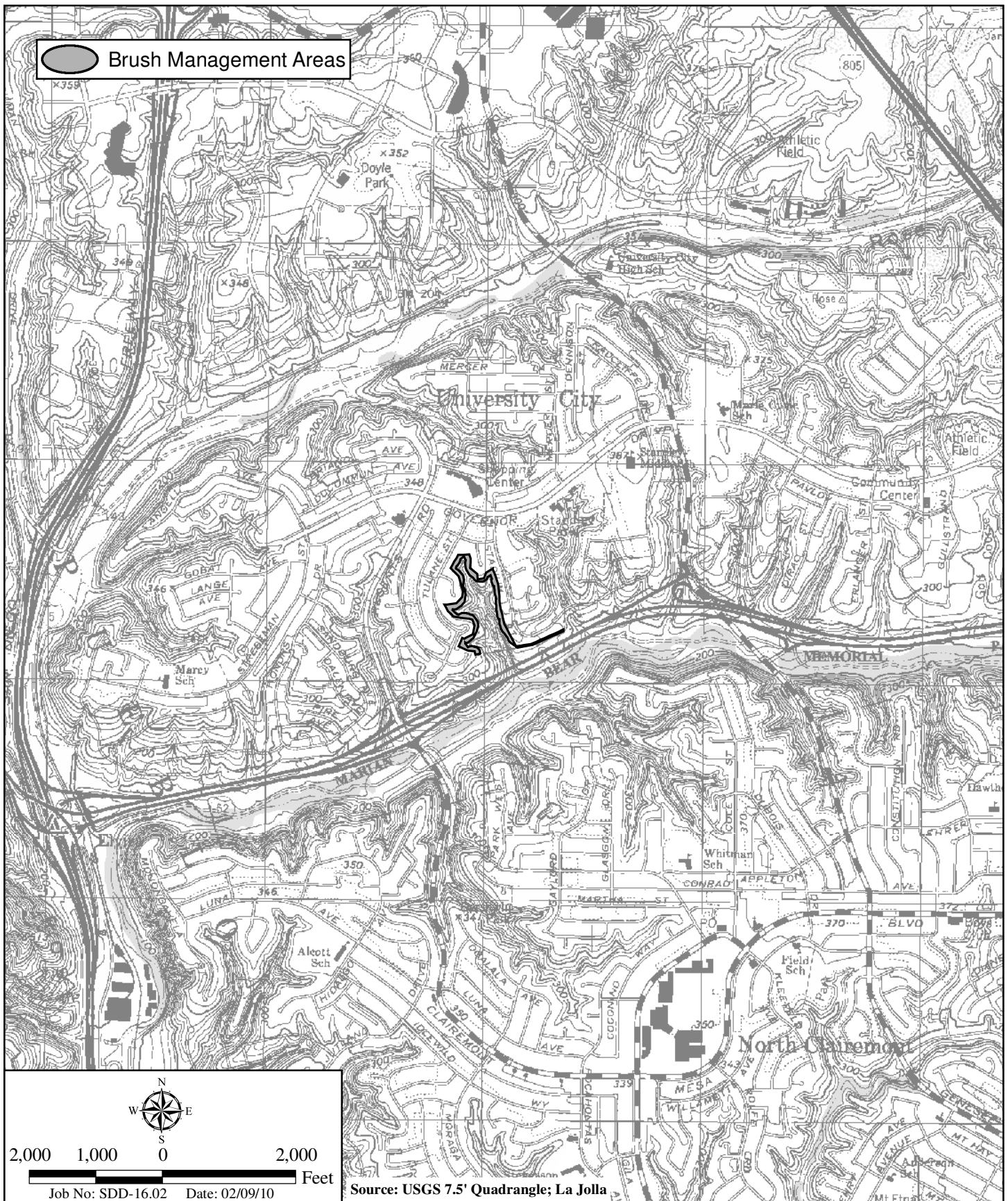


Project Location Map

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - RANCHO MISSION CANYON

HELIX

Figure 2a

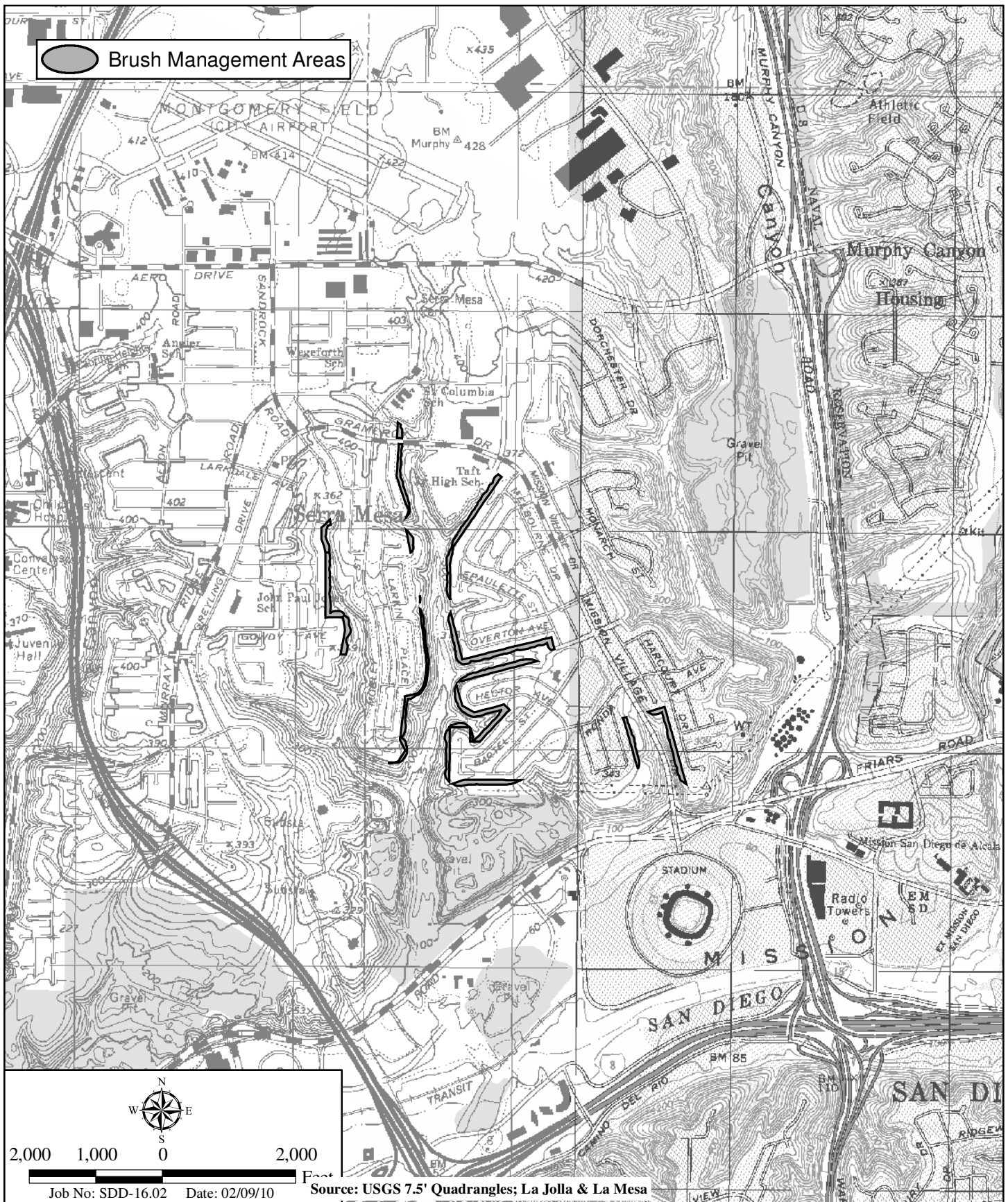


Project Location Map

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - MARIAN BEAR

HELIX

Figure 2b



I:\ArcGIS\SDD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig2c_Location.mxd -EV

Project Location Map

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - SERRA MESA

HELIX

Figure 2c



Project Location Map

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - COWLES MOUNTAIN

2.3 RARE PLANT SURVEYS AND NESTING BIRD SURVEYS

Approximately 1 to 2 weeks prior to the contractor beginning brush management activities in an area, HELIX biologists will conduct a pre-thinning sensitive plant species survey, raptor nest survey (if trees are present), and migratory bird nest survey. All sensitive plant species will be documented and those to be avoided will be marked with bright pink flagging tape so that it will be easily visible to the brush removal crew. All shrubs and trees containing an active raptor or bird nest will also be documented on an aerial photograph, bright pink flagging tape will be used to indicate the location of the nest, and a HELIX biologist will show the work crew where the active bird nest is located prior to work activities beginning in that area.

2.4 NOMENCLATURE

Nomenclature in this report follows Holland (1986) for vegetation communities, Rebman and Simpson (2006) for plant species names, and the American Ornithologists' Union (2008) for bird species names. Sensitive plant species status is taken from CNPS (2009).

3.0 PRE-FUEL REDUCTION SITE CONDITIONS/CONSTRAINTS

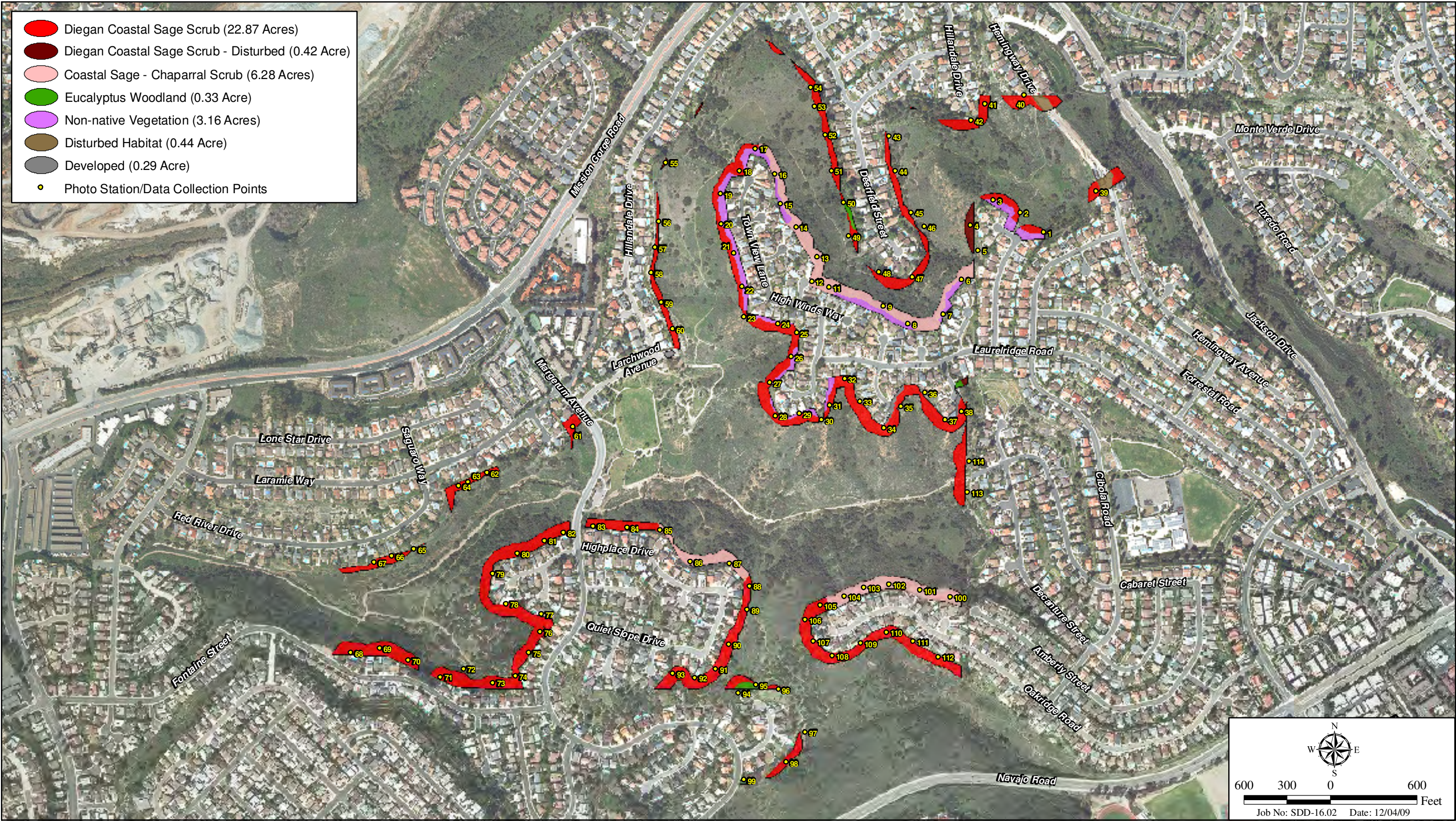
This section describes the site conditions within the Del Cerro fuel reduction areas as they exist prior to the execution of fuel reduction in 2009-2010. Vegetation communities and photo station/data collection points are provided in Figures 3a through 3e. Sensitive biological resources observed during the pre-fuel reduction data collection are provided in Figures 4a through 4e. Brush management compliance and proposed access to the work areas are provided in Figures 5a through 5e.

3.1 VEGETATION COMMUNITIES

3.1.1 Rancho Mission Canyon

Five vegetation communities (Diegan coastal sage scrub [including disturbed], coastal sage-chaparral scrub, eucalyptus woodland, non-native vegetation, and disturbed habitat) and developed lands were mapped within the Rancho Mission Del Cerro fuel reduction area (Figure 3a; Table 1). Two of the vegetation communities are considered sensitive by the City: Diegan coastal sage scrub and coastal sage-chaparral scrub. A description of each vegetation community is provided in Appendix A.

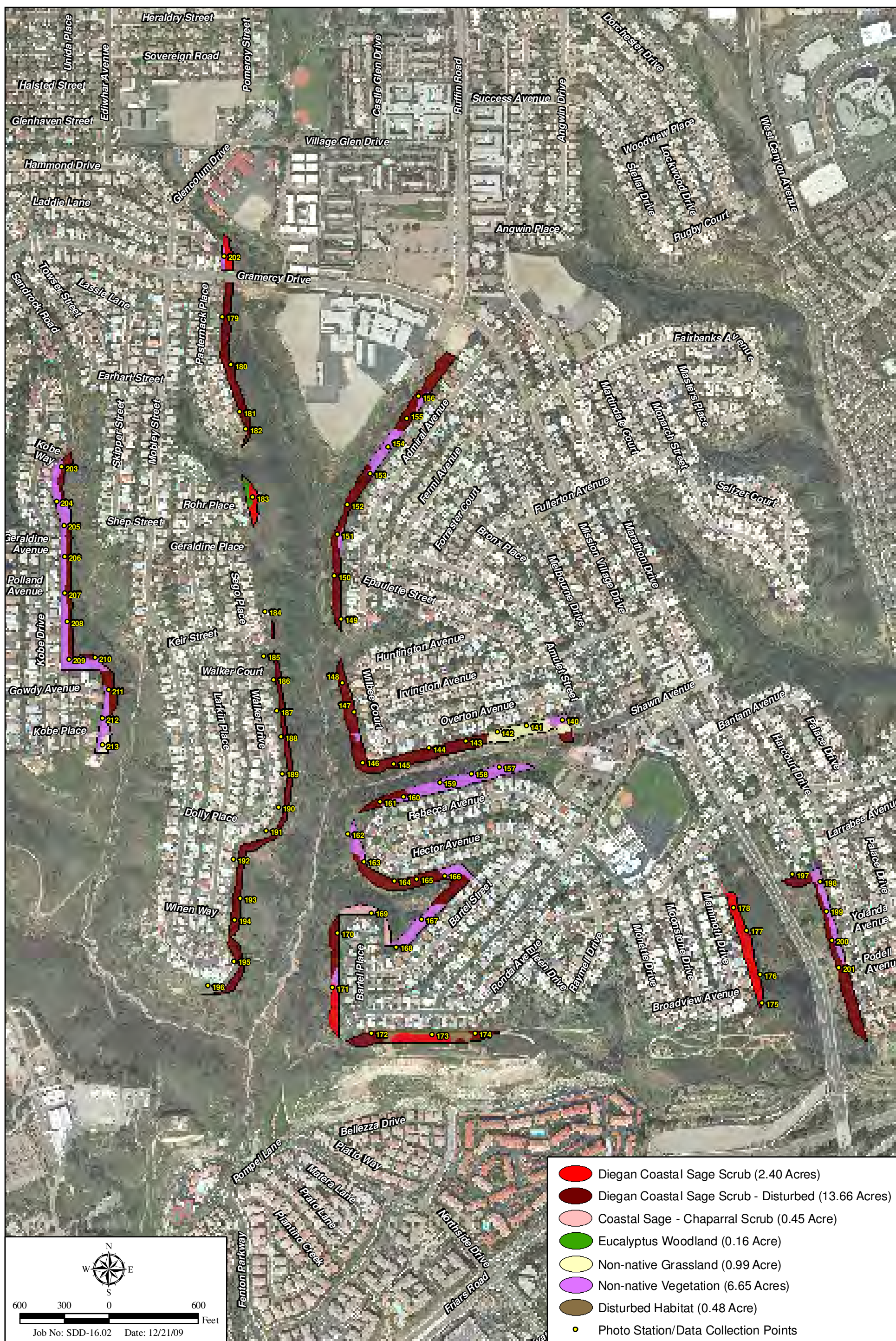
Table 1 Vegetation Communities within the Rancho Mission Canyon Fuel Reduction Area	
Vegetation Community	Acres
Diegan Coastal Sage Scrub (including disturbed)	23.3
Coastal Sage-Chaparral Scrub	6.3
Eucalyptus Woodland	0.3
Non-native Vegetation	3.2
Disturbed Habitat	0.4
Developed	0.3
TOTAL	33.8



I:\ArcGIS\SDD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig3a_Vegetation.mxd -JP

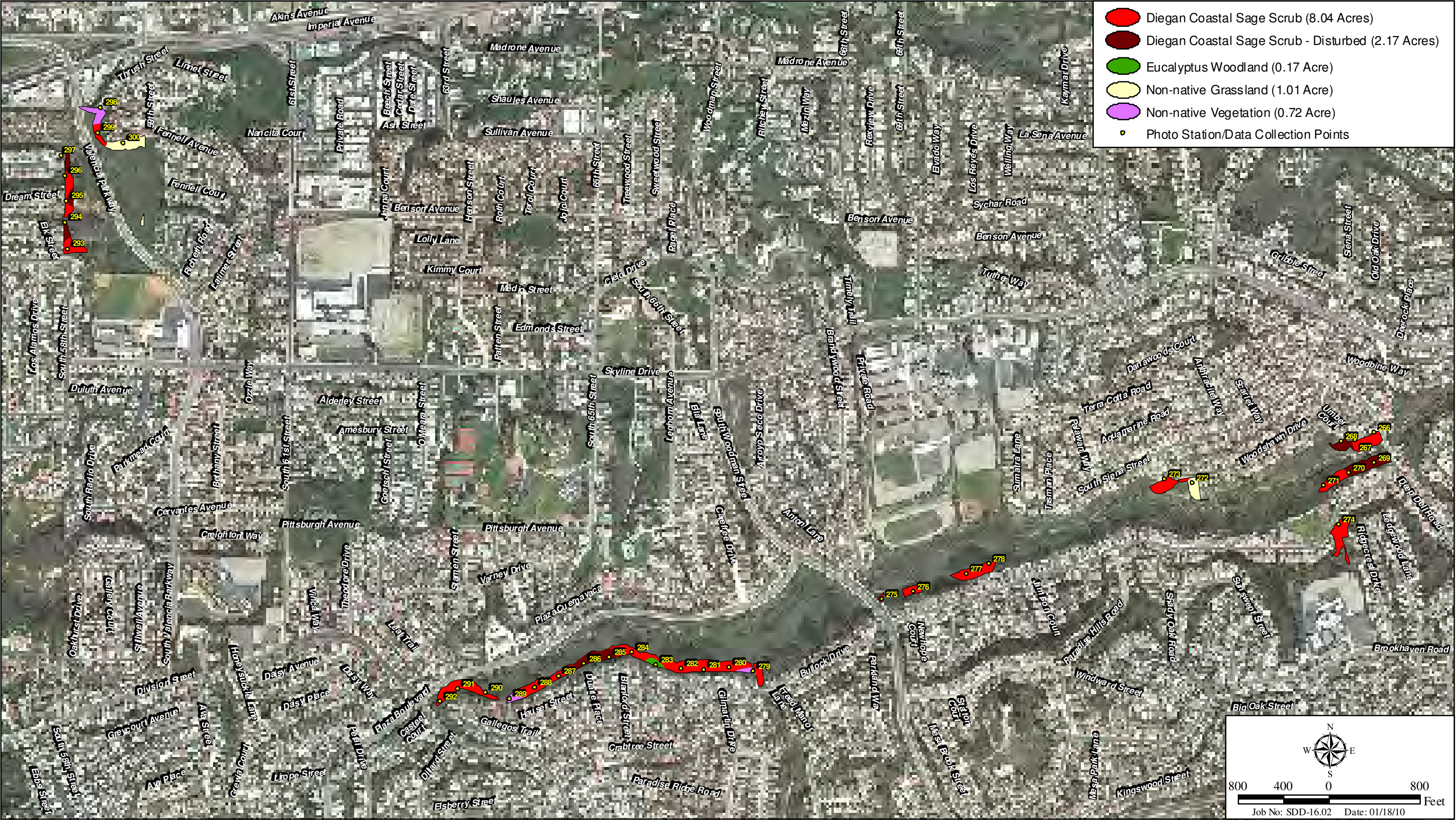


I:\ArcGIS\SDD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig3b_Vegetation.mxd -RK





I:\ArcGIS\SD-16.01 City Brush Management\Map\IO\Fuel_Modification_Plan\Del Cerro\Fig3d_Vegetation.mxd - RK



F:\ArcGIS\SW\SD-16.01 City Brush Management Map\BIO\Final\Modifications\Photo Data\Encanto_Vegetation.mxd - RK



F:\ArcGIS\SDD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig4a_SensitiveResources.mxd -JP

Sensitive Resources

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - RANCHO MISSION CANYON

Figure 4a

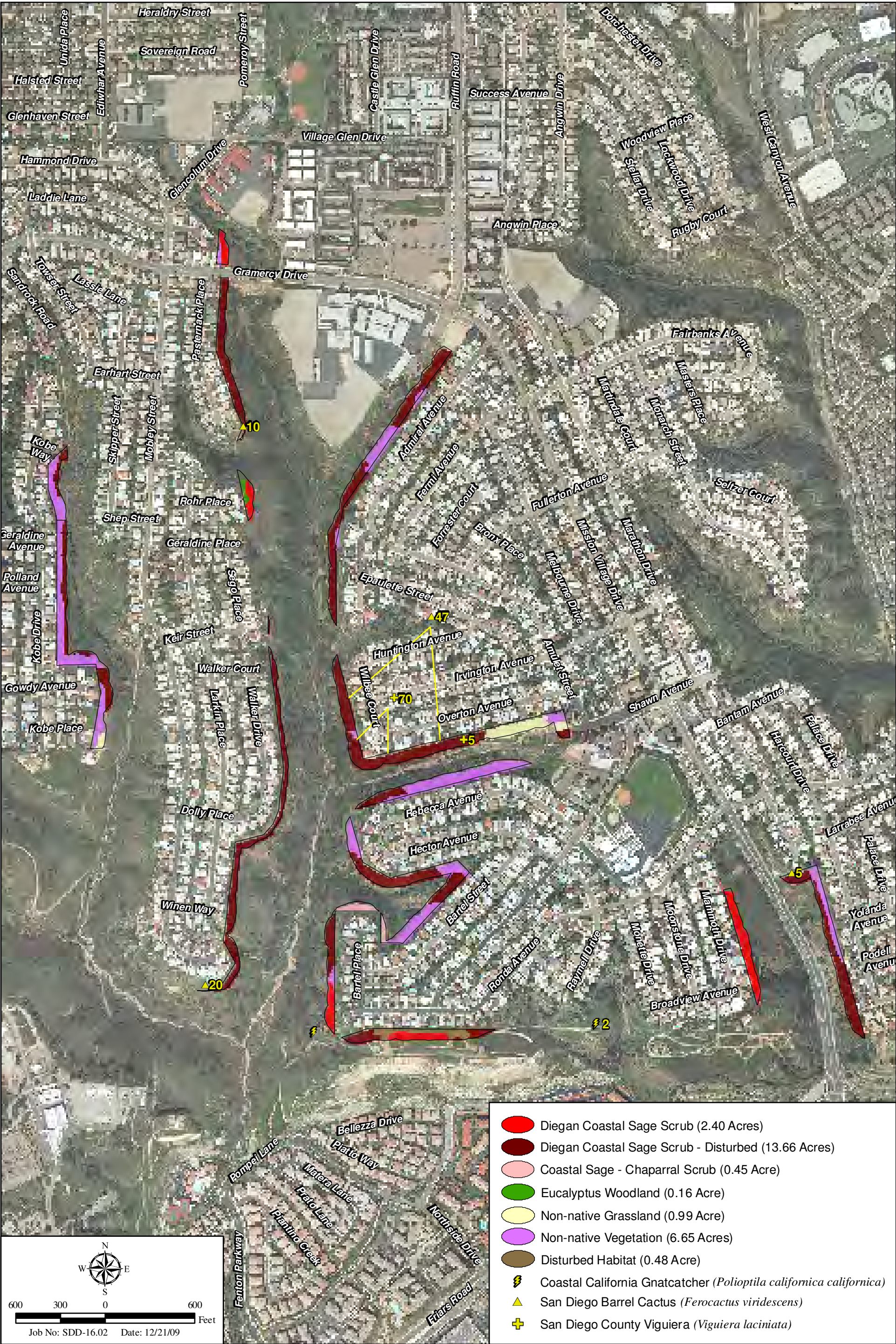


F:\ArcGIS\SD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig4b_SensitiveResources.mxd -RK

Sensitive Resources

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - MARIAN BEAR

Figure 4b

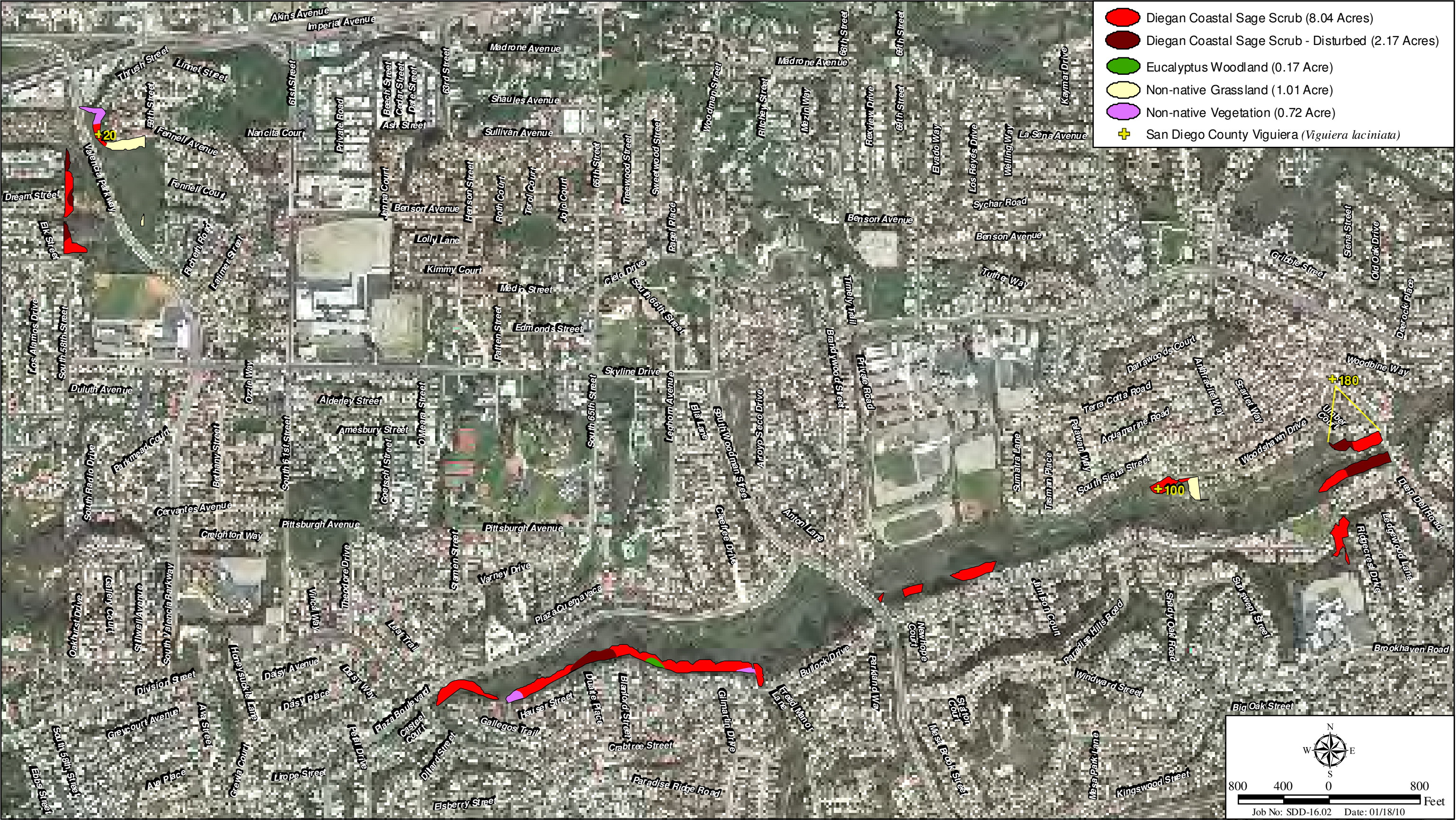


Sensitive Resources

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - SERRA MESA



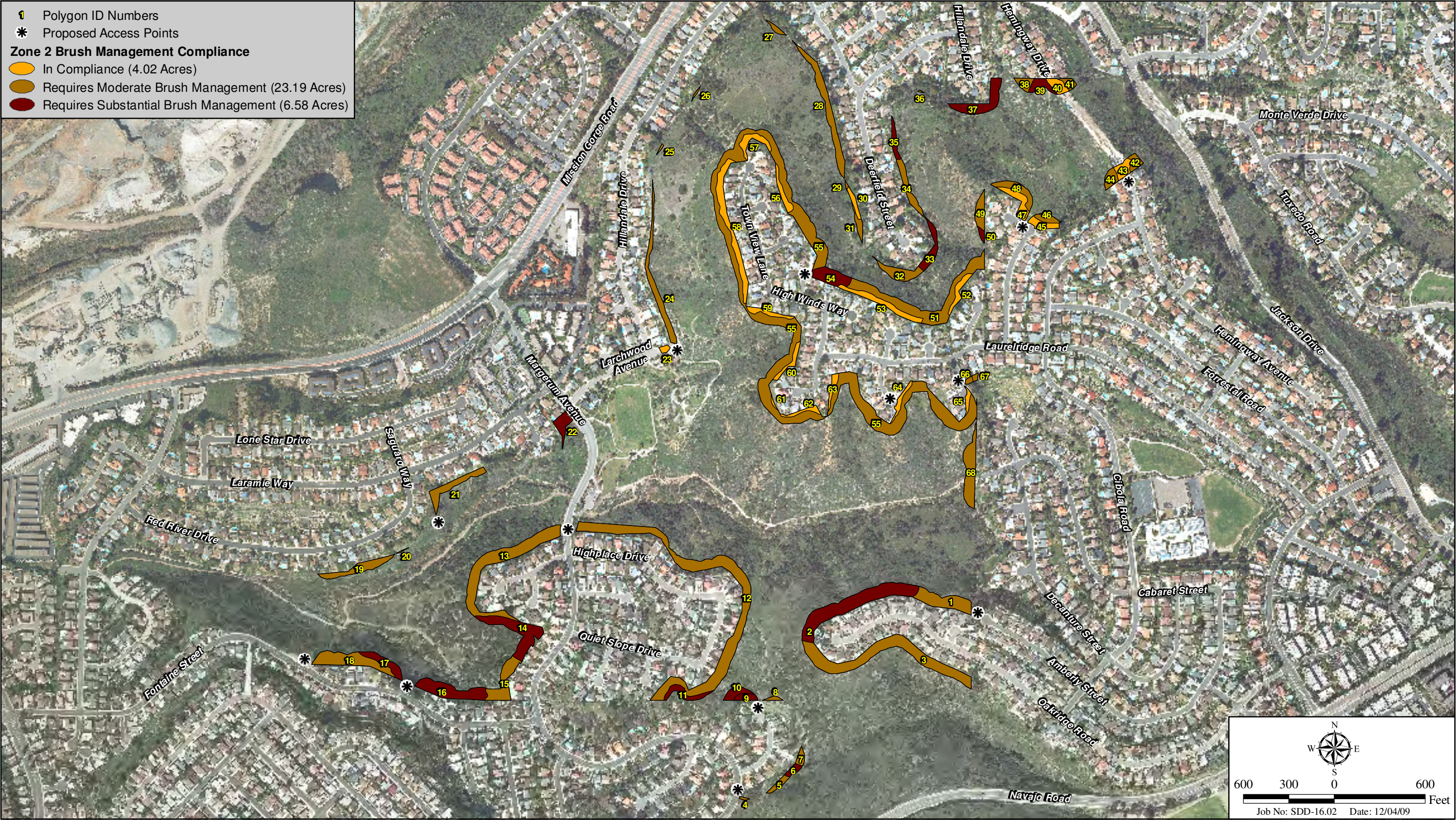
Figure 4c



Sensitive Resources

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - ENCANTO

Figure 4e



I:\ArcGIS\SDD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig5a_BrushManagement_Compliance.mxd -JP

Brush Management Compliance and Proposed Access

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - RANCHO MISSION CANYON

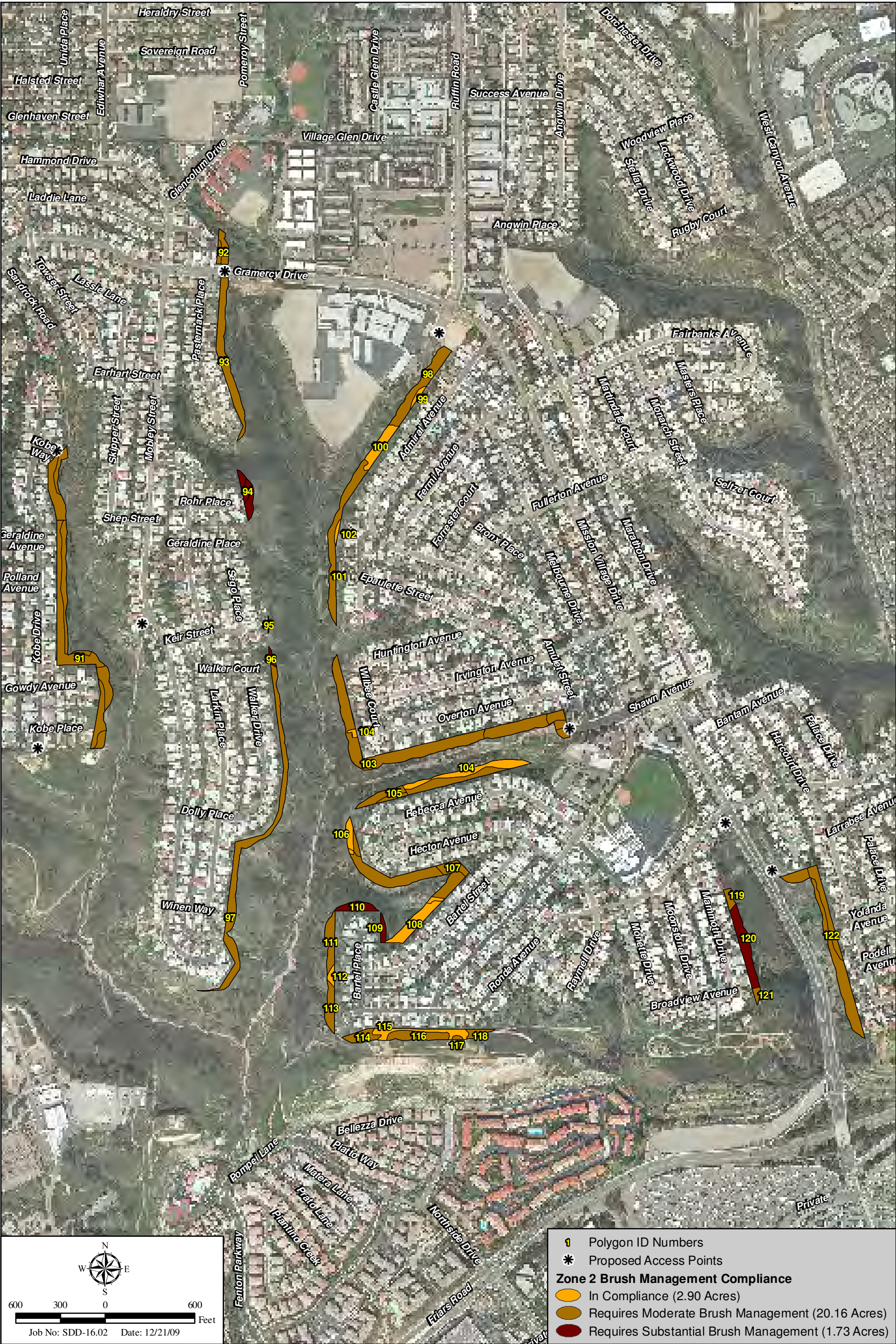
Figure 5a



F:\ArcGISW\SDD-16.01 CityBrushMgmt\Map\BIO\Fuel_Modification_Plan\DelCerro\Fig5b_BrushManagement_Compliance.mxd - RK

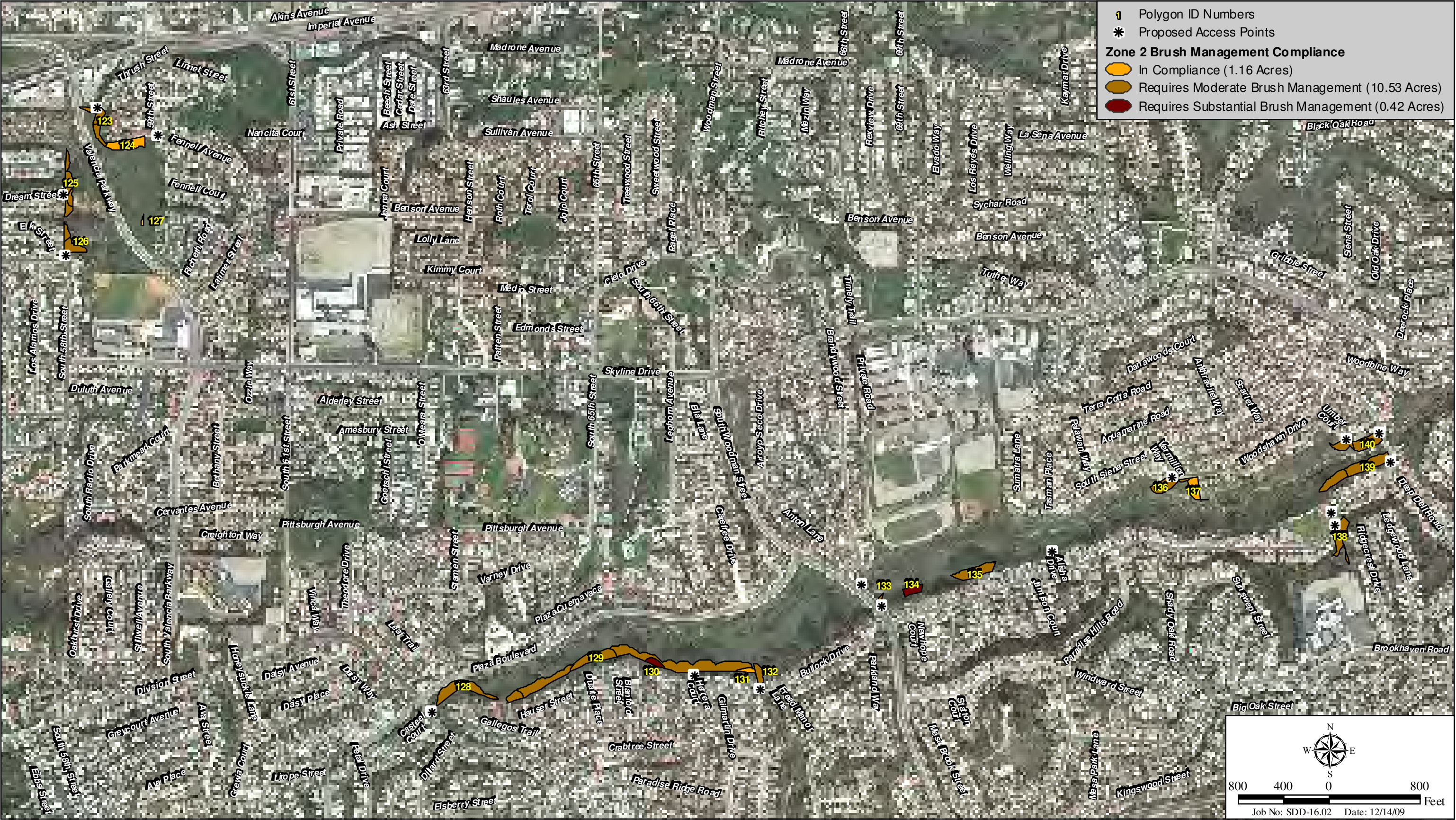
Brush Management Compliance and Proposed Access

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - MARIAN BEAR



Brush Management Compliance and Proposed Access

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - SERRA MESA



F:\ArcGIS\SD-16.01 City Brush Management Map\BIO\Fuel Modification\Del Cerro\Fuel Brush Management Compliance.mxd - RK

Brush Management Compliance and Proposed Access

CITY OF SAN DIEGO BRUSH MANAGEMENT PROJECT - ENCANTO

Figure 5e

3.1.2 Marian Bear

Four vegetation communities (Diegan coastal sage scrub – disturbed, coastal sage-chaparral scrub, eucalyptus woodland, and non-native vegetation) were mapped within the Marian Bear fuel reduction area (Figure 3b; Table 2). Two of the vegetation communities are considered sensitive by the City: Diegan coastal sage scrub and coastal sage-chaparral scrub. A description of each vegetation community is provided in Appendix A.

Table 2 Vegetation Communities within the Marian Bear Fuel Reduction Area	
Vegetation Community	Acres
Diegan Coastal Sage Scrub – disturbed	3.9
Coastal Sage-Chaparral Scrub	0.9
Eucalyptus Woodland	0.1
Non-native Vegetation	1.5
TOTAL	6.4

3.1.3 Serra Mesa

Six vegetation communities (Diegan coastal sage scrub [including disturbed], coastal sage-chaparral scrub, eucalyptus woodland, non-native grassland, non-native vegetation, and disturbed habitat) were mapped within the Serra Mesa fuel reduction area (Figure 3c; Table 3). Three of the vegetation communities are considered sensitive by the City: Diegan coastal sage scrub, coastal sage-chaparral scrub, and non-native grassland.

Table 3 Vegetation Communities within the Serra Mesa Fuel Reduction Area	
Vegetation Community	Acres
Diegan Coastal Sage Scrub (including disturbed)	16.1
Coastal Sage-Chaparral Scrub	0.5
Eucalyptus Woodland	0.2
Non-native Grassland	1.0
Non-native Vegetation	6.6
Disturbed Habitat	0.5
TOTAL	25.0

3.1.4 Cowles Mountain

Two vegetation communities (Diegan coastal sage scrub [including disturbed] and non-native vegetation) were mapped within the Cowles Mountain fuel reduction area (Figure 3d; Table 4). Diegan coastal sage scrub is considered sensitive by the City. A description of each vegetation community is provided in Appendix A.

HELIX

<p style="text-align: center;">Table 4 Vegetation Communities within the Cowles Mountain Fuel Reduction Area</p>	
Vegetation Community	Acres
Diegan Coastal Sage Scrub (including disturbed)	13.9
Non-native Vegetation	1.9
TOTAL	14.8

3.1.5 Encanto

Four vegetation communities (Diegan coastal sage scrub [including disturbed], eucalyptus woodland, non-native grassland, and non-native vegetation) were mapped within the Encanto fuel reduction area (Figure 3e; Table 5). Diegan coastal sage scrub and non-native grassland are considered sensitive by the City. A description of each vegetation community is provided in Appendix A.

<p style="text-align: center;">Table 5 Vegetation Communities within the Encanto Fuel Reduction Area</p>	
Vegetation Community	Acres
Diegan Coastal Sage Scrub (including disturbed)	10.2
Eucalyptus Woodland	0.2
Non-native Grassland	1.0
Non-native Vegetation	0.7
TOTAL	12.1

3.2 SENSITIVE PLANT SPECIES

3.2.1 Rancho Mission Canyon

Three sensitive plant species were documented within the Rancho Mission Canyon area: California adolphia (*Adolphia californica*), San Diego barrel cactus (*Ferocactus viridescens*), and San Diego County viguiera (*Viguiera laciniata*; Figure 4a).

California adolphia (*Adolphia californica*)

Listing: --/--; CNPS List 2.1;

Distribution: Below 1,000 feet in elevation in western San Diego County and northwestern Baja California, Mexico

Habitat: Most often found in sage scrub but occasionally occurs in peripheral chaparral habitats, particularly hillsides near creeks. Usually associated with xeric locales where shrub canopy reaches 4 or 5 feet.

Status on site: Approximately 30 individuals were in the western portion of the Del Cerro area, south of Laramie Way and east of Saguaro Way (Figure 4a).

HELIX

San Diego barrel cactus (*Ferocactus viridescens*)

Listing: --/--; CNPS List 2.1; City MCSP Covered

Distribution: San Diego County; Baja California, Mexico

Habitat: Optimal habitat for this cactus appears to be Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles.

Status on site: A grouping of 13 individuals and a grouping of 30 individuals occurred south of Oakridge Road in the southeast portion of the Del Cerro area (Figure 4a).

San Diego County viguiera (*Viguiera laciniata*)

Listing: --/--; CNPS List 4.2

Distribution: San Diego and Orange County; Baja California, Mexico

Habitat: Diegan coastal sage scrub and coastal sage-chaparral scrub. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types.

Status on site: Patches ranging in size from approximately 5 to over 100 individuals were scattered throughout the brush management area, generally on south- and west-facing slopes. Several larger patches of individuals totaled over 400 individuals south of Oakridge Road in the southeast portion of the Del Cerro area (Figure 4a).

3.2.2 Marian Bear

No sensitive plant species were documented within the Marian Bear area during the initial assessment (Figure 4b).

3.2.3 Serra Mesa

Two sensitive plant species were documented within the Serra Mesa area: San Diego barrel cactus and San Diego County viguiera (Figure 4c).

San Diego barrel cactus (*Ferocactus viridescens*)

Listing: --/--; CNPS List 2.1; City MCSP Covered

Distribution: San Diego County; Baja California, Mexico

Habitat: Optimal habitat for this cactus appears to be Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles.

Status on site: Groupings of individuals occurred in 4 areas of Serra Mesa: 10 individuals east of Pasternack Place, 20 individuals south of Mobley Street, 5 individuals east of Mission Village Drive, and 47 individuals west and south of Overton Avenue (Figure 4c).

San Diego County viguiera (*Viguiera laciniata*)

Listing: --/--; CNPS List 4.2

Distribution: San Diego and Orange County; Baja California, Mexico

Habitat: Diegan coastal sage scrub and coastal sage-chaparral scrub. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types.

Status on site: A patch of approximately 70 individuals was noted in the central portion of the Serra Mesa work area, west and south of Overton Avenue (Figure 4c).

HELIX

3.2.4 Cowles Mountain

One sensitive plant species was documented within the Cowles Mountain area: San Diego County viguiera (Figure 4d).

San Diego County viguiera (*Viguiera laciniata*)

Listing: --/--; CNPS List 4.2

Distribution: San Diego and Orange County; Baja California, Mexico

Habitat: Diegan coastal sage scrub and coastal sage-chaparral scrub. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types.

Status on site: Patches ranging in size from approximately 5 to 160 individuals were observed in the Cowles Mountain brush management area (Figure 4d). One large patch in the western area (adjacent to Stoneview Court) totaled approximately 500 individuals (Figure 4d).

3.2.5 Encanto

One sensitive plant species was documented within the Encanto area: San Diego County viguiera (Figure 4e).

San Diego County viguiera (*Viguiera laciniata*)

Listing: --/--; CNPS List 4.2

Distribution: San Diego and Orange County; Baja California, Mexico

Habitat: Diegan coastal sage scrub and coastal sage-chaparral scrub. Generally, shrub cover is more open than at mesic, coastal locales supporting sage scrub. Occurs on a variety of soil types.

Status on site: Three patches ranging in size from approximately 20 to 180 individuals were observed in the Encanto brush management area, generally on south- and west-facing slopes. Approximately 20 individuals were observed in the northwest area (east of Valencia Parkway); approximately 100 individuals were observed in the eastern area (south of Woodshawn Drive); and approximately 180 individuals were observed in the eastern area (immediately west of Deep Dell Road; Figure 4e).

3.3 COASTAL CALIFORNIA GNATCATCHER

Fuel reduction activities can be conducted in Diegan coastal sage scrub, coastal sage-chaparral scrub, and maritime succulent scrub without restrictions related to CAGN (including the locations described below) if activities are conducted between August 16 and February 28. Protocol CAGN surveys would need to be conducted if fuel reduction activities will occur in the communities listed above between March 1 and August 15.

3.3.1 Rancho Mission Canyon

The CAGN was detected in two locations during the pre-fuel reduction data collection (no protocol surveys for CAGN were conducted). The first individual was detected in the western portion of the Rancho Mission Canyon work area, south of Red River Drive (Figure 4a); the individual was heard calling from the Diegan coastal sage scrub adjacent to the brush management area. The second individual was detected in the northern portion of the work area, west of Town View Lane (Figure 4a).

HELIX

The bird was heard calling from the Diegan coastal sage scrub that occurs adjacent to the brush management area.

3.2.2 Marian Bear

No CAGN were detected during the pre-fuel reduction data collection (no protocol surveys for CAGN have been conducted as of the time that this plan was prepared).

3.2.3 Serra Mesa

The CAGN was detected in two locations during the pre-fuel reduction data collection (no protocol surveys for CAGN were conducted). The first individual was detected in the southern portion of the Serra Mesa work area, southwest of Bartel Place (Figure 4c); the individual was heard calling from the Diegan coastal sage scrub adjacent to the brush management area. Two other individuals were detected in the southern portion of the work area, south of Raymell Drive (Figure 4c). The birds were seen and heard calling from the Diegan coastal sage scrub that occurs adjacent to the brush management area.

3.2.4 Cowles Mountain

No CAGN were detected during the pre-fuel reduction data collection (no protocol surveys for CAGN have been conducted as of the time that this plan was prepared).

3.2.5 Encanto

No CAGN were detected during the pre-fuel reduction data collection (no protocol surveys for CAGN have been conducted as of the time that this plan was prepared).

3.4 NESTING BIRDS AND RAPTORS

No active raptor nests or other active bird nests were noted during the pre-fuel reduction areas. HELIX will conduct searches for nesting birds and active raptor nests prior to the start of fuel reduction activities in each area, as described in Section 2.3 above.

3.5 BRUSH MANAGEMENT COMPLIANCE

Portions of the Del Cerro fuel reduction area were considered to be in compliance with City brush management regulations (Figure 5a through 5e). Areas mapped as disturbed habitat and developed lands were considered to be in compliance because plant cover was either very low or absent completely. Areas containing dense mats of hottentot fig (*Carpobrotus edulis*) were considered to be in compliance when shrub cover was below 50 percent, herbaceous cover was below 2 feet in height, and trees were either absent or had been limbed up to the proper height.

The majority of the Del Cerro fuel reduction area was assessed as needing moderate brush management. Moderate brush management was a category determined by HELIX and generally is defined as areas where shrubs and/or trees need to be thinned or pruned in accordance with City brush management regulations. “Moderate” included areas that had previously been thinned, but some

HELIX

brush management was still needed because debris was present, cover was greater than 50 percent, or trees needed to be pruned.

Several areas were considered by HELIX to need substantial brush management. Substantial brush management was a category determined by HELIX and is generally defined as areas where no brush management had occurred, existing habitat is very dense, and/or trees are spaced in close proximity to each other. Dense stands of lemonadeberry (*Rhus integrifolia*) are included in this category; dense stands of lemonadeberry were located in the Rancho Mission Canyon, Marian Bear, and Serra Mesa work areas (Figures 5a through 5e).

Sample photos from various habitat types are provided in Appendix B; remaining photos are provided in the attached CD.

3.6 PROPOSED ACCESS POINTS

Proposed access points to each fuel reduction area are shown in Figures 5a through 5e.

4.0 FUEL REDUCTION EXECUTION/MONITORING

The following is a checklist of items that need to be conducted prior to starting fuel reduction activities within any particular area.

- ❑ Flagging fuel reduction limits by contractor.
- ❑ Documentation of pre-fuel reduction site conditions by the project biologist.
- ❑ Rare plant survey by the project biologist.
- ❑ Nesting raptor/other bird survey by the project biologist.
- ❑ CAGN surveys (for work conducted between March 1 and August 15 in coastal sage scrub, coastal sage-chaparral scrub, or maritime succulent scrub)
- ❑ Identification of any cultural/Native American resources requiring monitoring, as described in the RFP

Prior to the start of fuel reduction activities, HELIX will provide an initial training and orientation program to the contractor. HELIX will provide a brush management regulations pamphlet to all fuel reduction personnel during the initial orientation and will explain the brush management program. Copies of a plant photo booklet will also be distributed to personnel. Monthly refresher training sessions (monthly tailgates) will also be conducted by HELIX on the first working day of each month. Any new crew members will receive an orientation on the brush management program. Fuel reduction monitors will keep a log of session dates and times of the training provided to personnel, which will be provided as a summary table in the post fuel reduction report.

During fuel reduction implementation, guidance will be provided by the biological monitor; however, it is the contractor's responsibility to be familiar with all applicable City brush management regulations/guidelines, as specified by the City in their Request for Bid. Upon completion of fuel reduction in an area, the biological monitor must inspect the area and determine that all work is completed in compliance with the applicable City open space regulations/guidelines.

HELIX

5.0 FUEL REDUCTION RECOMMENDATIONS

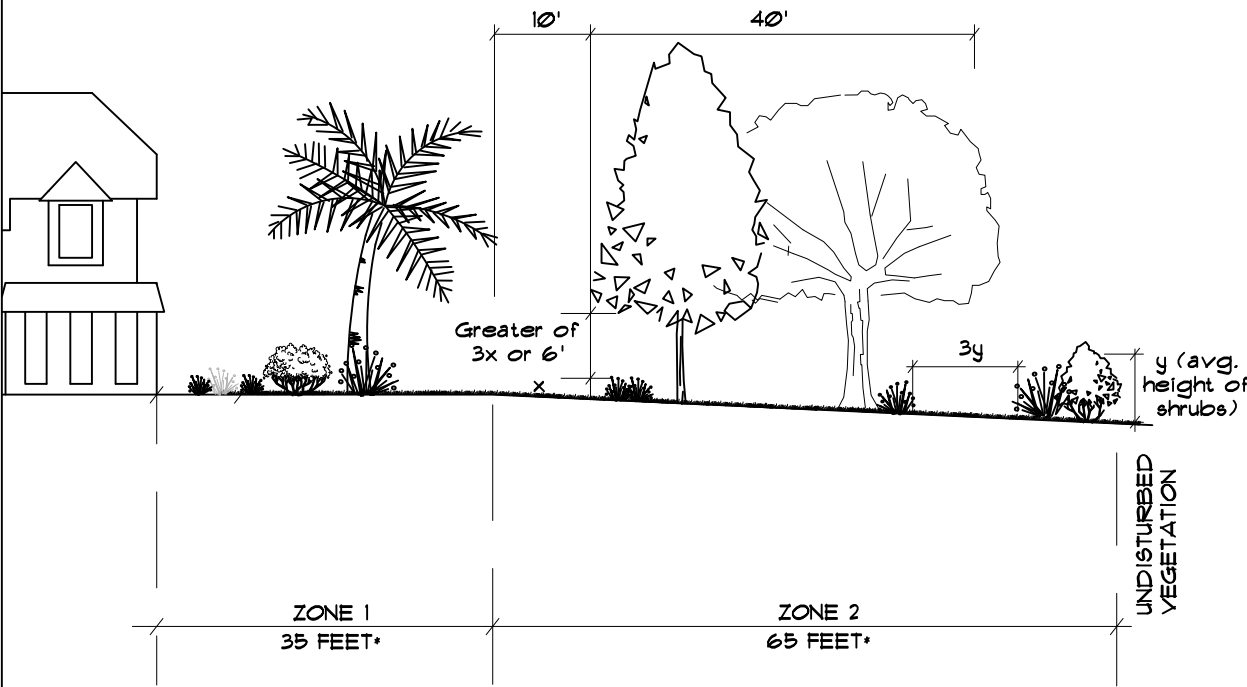
Recommendations for bringing the Del Cerro fuel reduction area into compliance with City brush management regulations are provided in Appendix C. Specific recommendations are provided for each vegetation community within a given landscape area. Landscape areas can be loosely defined as each urban canyon or block of open space. If vegetation communities within a landscape area varied, specific recommendations were provided for each area. Recommendations were made in accordance with Section 142.0412 of the SDMC, the Fire Prevention Bureau Policy B-08-01, and the City of San Diego Fire Safety and Brush Management Guide, as well as the City's clarifications on this project. Figure 6 shows a typical depiction of the brush management regulations and incorporates most of the City's clarifications for this project. More specific details will be provided by a biological monitor in the field, during fuel reduction implementation.

6.0 DELIVERABLES

A daily log will be filled out by the HELIX monitoring biologist each day that he or she is on site to monitor fuel reduction activities. The log will be sent to the City and to the contractor at the end of each week and will contain the monitoring dates, work areas, information on the pre- and post-clearing surveys, and a summary of the observations and activities occurring each day.

Once an area has been cleared by the contractor, a HELIX biologist will walk with the contractor to ensure that the area(s) are considered to be in compliance with brush management regulations. Any items identified during the walk will be noted on a punchlist, which will be provided to the contractor by the HELIX monitor. HELIX will work with the contractor and the City to ensure that all punchlist items are completed before fuel reduction activities are considered to be completed in an area.

Once fuel reduction activities are considered to be complete within the entire Del Cerro fuel reduction area, HELIX will prepare a Post Fuel Reduction Plan to summarize the post fuel reduction site conditions, in accordance with guidelines provided in HELIX's proposal (HELIX 2008). The Post Fuel Reduction Plan will be provided separately from this report.



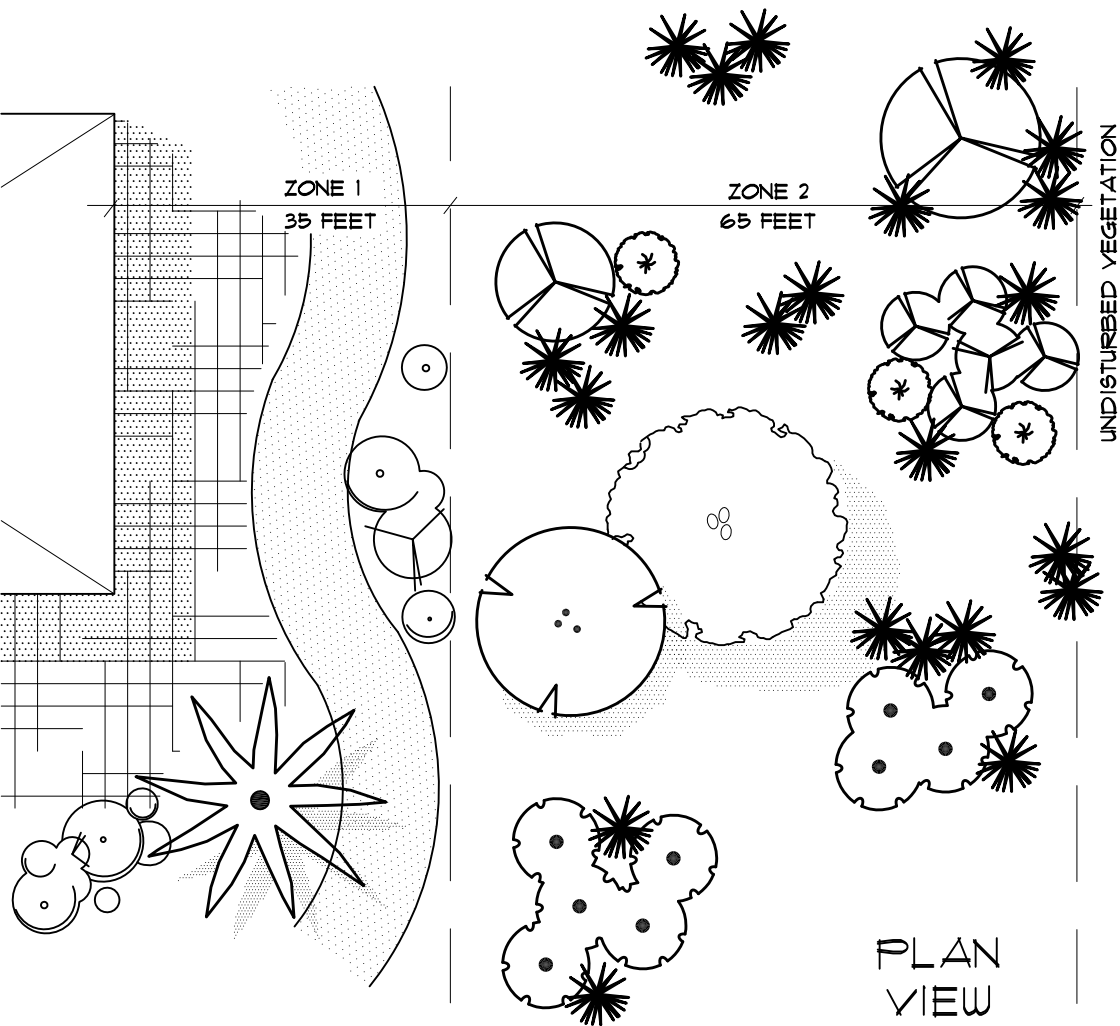
* Zone 1 and 2 shall not exceed 100 feet. Distances shown are typical. Zone 2 should be decreased by 15 feet for each 1 foot increase in Zone 1 width, with a maximum reduction to a 30-foot wide Zone 2.

SECTION
VIEW

ZONE 2 FUEL REDUCTION DIAGRAM

- 1) Conduct tree layer thinning/pruning/removals.
Horizontal spacing: Remove and/or prune existing non-native trees such that no tree canopy grouping is larger than 40 feet in diameter and there is at least 10 feet between tree canopy groupings. This spacing does not apply to native trees.
Vertical spacing: Trim lower branches of all trees (i.e., native and non-native) such that spacing between understory shrubs and lower tree limbs is at least 3 times the height of the shrubs, or 6-feet - whichever is greater.
- 2) Conduct shrub layer thinning/pruning/removals. Identify native shrub groupings. Up to 400 sq. ft. (20'x20' or any area encircled by an 80'-long rope).
Horizontal spacing: 3 times the average height of shrubs within the shrub groupings, measured between edges of groupings. Shrub groupings to provide no more than 50% total cover. Between groupings, trim all shrubs taller than 2 feet to 6-inches, except coastal sage scrub shrubs*, which should be trimmed to 12-inches.
Vertical spacing: Light pruning within shrub groupings. If vertical spacing beneath trees was not attained by trimming trees up, shrubs should be trimmed top-down.
- 3) Conduct herbaceous layer thinning. Cut expanses of native/naturalized grasses to 2-inches high. Individual grass clumps and broad-leaved herbs may be maintained at 24-inches high when they are isolated from other fuels, or where necessary to stabilize soil and prevent erosion.

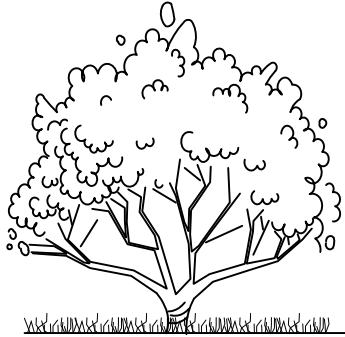
e.g.:
California Sagebrush (*Artemisia californica*)
Black Sage (*Salvia mellifera*)
Chamise (*Adenostoma fasciculatum*)
Buckwheat (*Eriogonum fasciculatum*)



Shrub
Pruning



Unpruned Shrub
(2 to 25 feet tall)



Pruned Shrub:
Remove dead material.
Trim lower branches
Do not remove more than
25% of the existing canopy

Fuel Reduction Diagram

7.0 REFERENCES

- American Ornithologists' Union. 2008. List of the 2,048 Bird Species (with Scientific and English Names) Known from the AOU Check-list Area. URL: <http://www.aou.org/checklist/index.php3>.
- California Native Plant Society (CNPS). 2009. Inventory of Rare and Endangered Plants. Internet searchable database Version 7.09b interim. URL: <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>. Updated quarterly. April 10.
- City of San Diego (City). 2008a. Bulletin #1: Brush Management Guide. Published by San Diego Fire-Rescue Department on July 1.
- 2008b. Clarifications of Brush Management Regulations and Landscape Standards (FPB Policy B-08-1). Revised by Fire Prevention Bureau on June 6.
- 2008c. Request for Proposal (No. 9442-09-W-RFP) to Furnish the City of San Diego with Brush Management Consulting Services.
2004. San Diego Municipal Code/Land Development Code Biology Guidelines. August.
- Conrad, C.E. 1987. Common shrubs of chaparral and associated ecosystems of southern California. Gen. Tech. Rep. PSW-99. Berkeley, CA. Pacific Southwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture, 86 pp.
- HELIX Environmental Planning, Inc. (HELIX). 2008. Volume I. Technical Proposal to Provide Brush Management Consultant Services to the City of San Diego. October 23.
- Holland R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, State of California, Department of Fish and Game, Sacramento, 156 pp.
- Jackson, L. 1985. Ecological origins of California's Mediterranean grasses. *Journal of Biogeography* 12: 349-361.
- Keeley, J. and S. Keeley. 1988. Chaparral. North American Vegetation. Eds. M. Barbour and W. Billings. Cambridge University Press, pp. 165-207.
- Rebman, Jon P. and Michael G. Simpson. 2006. Checklist of the Vascular Plants of San Diego County, 4th Edition. San Diego Natural History Museum and San Diego State University.
- Rundel, P. 1986. Structure and function in California chaparral. *Fremontia*, Vol. 14 (3), pp. 3-10.
- U.S. Fish and Wildlife Service (USFWS). 1997. Coastal California Gnatcatcher (*Poliophtila californica californica*) Presence/Absence Survey Guidelines. February 28.

Appendix A

VEGETATION COMMUNITIES IN THE DEL CERRO AREA

Diegan Coastal Sage Scrub

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Four distinct coastal sage scrub geographical associations (northern, central, Venturan, and Diegan) are recognized along the California coast. Diegan coastal sage scrub is dominated by subshrubs with leaves that abscise during drought and are replaced by a lesser amount of smaller leaves. This adaptation of drought evasion allows these species to better withstand the prolonged drought period in the summer and fall in areas of low precipitation. Coastal sage scrub occurs on a variety of soil types, both chemically and physically, from sandy lithosols on siliceous sandstone to clay-rich chernozems on volcanic ash. Water is less likely to penetrate to depth in clay soils than in siliceous soils. Clay soils generally lose more moisture through runoff, have lower infiltration rates, store more moisture in an equivalent depth of soil, and are likely to lose a greater proportion of moisture through capillary action and transpiration from shallow-rooted species than siliceous soils. Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum* ssp. *fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*).

Diegan coastal sage scrub is considered a sensitive habitat by the USFWS, CDFG, and City of San Diego, and is given the highest inventory priority in the California Natural Diversity Database (CNDDB). This habitat type supports a number of federally and state endangered, threatened, and rare plants as well as several bird, reptile, and insect species that are federally listed or are candidates for federal listing, including the coastal California gnatcatcher (*Poliioptila californica californica*).

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced species that has often been planted purposely for wind blocking, ornamental, and hardwood production purposes. Most groves are monotypic with the most common species being either the blue gum (*Eucalyptus gunnii*) or red gum (*E. camaldulensis* ssp. *obtusa*). The understory within well-established groves is usually very sparse due to the closed canopy and allelopathic nature of the abundant leaf and bark litter. If sufficient moisture is available, this species becomes naturalized and is able to reproduce and expand its range. The sparse understory offers only limited wildlife habitat; however, as a wildlife habitat, these woodlands provide excellent nesting sites for a variety of raptors, including red-shouldered hawks (*Buteo lineatus*). During winter migrations, a large variety of warblers may be found feeding on the insects that are attracted to the eucalyptus flowers. Eucalyptus trees with active raptor nests are considered sensitive.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* sp.), red brome (*Bromus*

HELIX

rubens), ripgut (*B. diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These two factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual dominated non-native grassland (Jackson 1985). Non-native grassland is considered a sensitive habitat by the City of San Diego for its use as foraging habitat by local and migrating raptor species.

Non-native Vegetation

Characterized by predominantly non-native species introduced and established via human action. These areas are typically unirrigated, but may have been previously irrigated, and currently receive water as urban runoff or precipitation.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Developed Land

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained.



Diegan Coastal Sage Scrub
Point 45 - Rancho Mission Canyon
DC-PP90-Pre



Coastal Sage – Chaparral Scrub
Point 103 – Rancho Mission Canyon
DC-PP206-Pre

HELIX



Non-native vegetation
Point 17 – Rancho Mission Canyon
DC-PP034-Pre



Eucalyptus Woodland
Point 100 - Rancho Mission Canyon
DC-PP199-Pre

HELIX



Diegan Coastal Sage Scrub
Point 118 – Marion Bear
DC-PP235-Pre



Coastal Sage – Chaparral Scrub
Point 132 – Marion Bear
DC-PP264-Pre

HELIX



Eucalyptus Woodland
Point 132 – Marion Bear
DC-PP270-Pre



Non-native Vegetation
Point 123 – Marion Bear
DC-PP245-Pre

HELIX



Diegan Coastal Sage Scrub
Point 294 – Serra Mesa
DC-PP294-Pre



Coastal Sage – Chaparral Scrub
Point 169 – Serra Mesa
DC-PP338-Pre

HELIX



Eucalyptus Woodland
Point 183 – Serra Mesa
DC-PP366-Pre



Non-native grassland
Point 141 – Serra Mesa
DC-PP281-Pre

HELIX



Non-native Vegetation
Point 203 – Serra Mesa
DC-PP406-Pre



Disturbed Habitat
Point 174 – Serra Mesa
DC-PP348-Pre

HELIX



Diegan Coastal Sage Scrub
Point 223 – Cowles Mountain
DC-PP445-Pre



Non-native Vegetation
Point 227 – Cowles Mountain
DC-PP453-Pre.jpg

HELIX



Diegan Coastal Sage Scrub
Point 295 - Encanto
DC-PP589-Pre



Eucalyptus Woodland
Point 565 - Encanto
DC-PP565-Pre

HELIX



Non-native Grassland
Point 300 - Encanto
DC-PP599-Pre



Non-native Vegetation
Point 289 - Encanto
DC-PP578-Pre

HELIX

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
Rancho Mission Canyon Subarea										
										Existing shrub cover is generally 40 to 70 percent and portions occur on slopes greater than 50 percent. Shrub cover needs to be reduced to 50 percent cover by first removing invasive species, then other non-native species, followed by flammable native species, then other native species. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. Several non-native trees (myoporum) occur within this area and need to be limbed-up to 6 times the shrub height or to 6' from the ground, whichever is greater (they occur on slopes greater than 50 percent). All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
1	1	85	2	270	DCSS	--	N	Y	2	
2	3	125	4	305	DCSS	--	N	Y	2	same as 1
3	5	90	6	255	DCSS	--	Y	Y	2	same as 1
4	7	0	8	160	DCSS	--	N	Y	2	same as 1
5	9	330	10	170	DCSS	--	Y	Y	3	same as 1
6	11	20	12	220	DCSS + NNV	--	N	N	DCSS = 2 NNV = 1	same as 1
7	13	0	14	220	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
8	15	80	16	290	DCSS + NNV	--	Y	N	DCSS = 2 NNV = 1	same as 1
9	17	120	18	290	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
10	19	90	20	290	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
11	21	110	22	270	DCSS	--	Y	Y	3	same as 1
12	23	95	24	350	DCSS	--	Y	Y	3	same as 1
13	25	150	26	300	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
14	27	130	28	305	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
15	29	340	30	130	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
16	31	325	32	150	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
17	33	250	34	110	NNV	--	Y	N	1	same as 1

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
18	35	10	36	230	DCSS	--	Y	Y	2	same as 1
19	37	180	38	10	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
20	39	170	40	325	DCSS + NNV	Viguiera lacineata	Y	Y	DCSS = 2 NNV = 1	same as 1
21	41	155	42	325	DCSS + NNV	CAGN	Y	Y	DCSS = 2 NNV = 1	same as 1
22	43	160	44	330	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
23	45	85	46	345	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
24	47	100	48	280	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
25	49	165	50	320	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
26	51	205	52	30	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
27	53	160	54	35	DCSS + NNV	Viguiera lacineata	Y	Y	DCSS = 2 NNV = 1	same as 1
28	55	85	56	345	NNV	--	Y	N	1	same as 1
29	57	245	58	60	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
30	59	310	60	110	NNV	--	Y	N	1	same as 1
31	61	0	62	180	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 1
32	63	85	64	260	DCSS + NNV	Viguiera lacineata	Y	Y	DCSS = 2 NNV = 1	same as 1
33	65	330	66	130	DCSS	Viguiera lacineata	Y	Y	2	same as 1
34	67	40	68	290	DCSS + NNV	Viguiera lacineata	N	Y	DCSS = 2 NNV = 1	same as 1
35	69	195	70	340	DCSS	Viguiera lacineata	Y	Y	2	same as 1
36	71	120	72	295	DCSS + NNV	Viguiera lacineata	Y	Y	DCSS = 2 NNV = 1	same as 1
37	73	115	74	315	DCSS + NNV	Viguiera lacineata	Y	Y	DCSS = 2 NNV = 1	same as 1
38	75	10	76	180	DCSS	--	Y	Y	2	same as 1

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
39	77	200	78	335	DCSS + DH	--	Y	Y	DCSS = 2 DH = 1	This small DCSS occurs adjacent to a newly constructed road and is part of a steep slope. The road crosses through the brush management zone. Existing shrub cover is greater than 50 percent. Cover should be reduced to less than 50 percent using the prioritization lists provided. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
40	79	260	80	100	DCSS + DH	--	Y	Y	DCSS = 3 DH = 1	same as 39
41	81	180	82	290	DCSS	--	N	Y	3	Existing shrub cover is generally 50 to 80 percent. Shrub cover needs to be reduced to 50 percent cover by first removing invasive species (e.g., fennel), then other non-native species (e.g., acacia), followed by flammable native species, then other native species. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. Several non-native trees (eucalyptus and pepper trees) occur within this area and need to be limbed-up to 3 times the shrub height or to 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
42	83	270	84	70	DCSS	--	N	Y	3	same as 41
43	85	160	86	330	DCSS	Viguiera lacineata	N	Y	3	same as 41
44	87	165	88	340	DCSS	Viguiera lacineata	N	Y	3	same as 41
45	89	140	90	330	DCSS	--	N	Y	3	same as 41
46	91	130	92	290	DCSS	--	N	Y	3	same as 41
47	93	20	94	240	DCSS	--	N	Y	3	same as 41
48	95	85	96	295	DCSS	--	N	Y	2	same as 41
49	97	145	98	320	DCSS	--	N	Y	2	same as 41
50	99	325	100	130	DCSS	--	N	Y	2	same as 41
51	101	145	102	335	DCSS	--	N	Y	2	same as 41
52	103	330	104	145	DCSS	--	N	Y	2	same as 41

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
53	105	330	106	125	DCSS	--	N	Y	2	same as 41
54	107	300	108	130	DCSS	--	N	Y	2	same as 41
55	109	50	110	185	DCSS	--	N	Y	2	same as 56
56	111	350	112	175	DCSS	--	N	Y	2	Existing shrub cover is generally 40 to 60 percent. Shrub cover needs to be reduced using the prioritization lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
57	113	355	114	170	DCSS	--	N	Y	2	same as 56
58	115	345	116	155	DCSS	--	N	Y	2	same as 56
59	117	325	118	130	DCSS	--	N	Y	2	same as 56
60	119	320	120	130	DCSS	--	N	Y	2	same as 56
61	121	305	122	180	DCSS	--	N	Y	3	This small DCSS occurs adjacent to Marjerum Avenue. Existing shrub cover is greater than 50 percent. Cover should be reduced to less than 50 percent using the prioritization lists provided (tamarisk should be removed first). All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
62	123	45	124	250	DCSS	Viguiera lacineata	Y	Y	3	Existing shrub cover is generally 40 to 70 percent and portions occur on slopes greater than 50 percent. Shrub cover needs to be reduced to 50 percent cover by first removing invasive species, then other non-native species, followed by flammable native species, then other native species. Avoid viguiera and California adolphia where they occur. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
63	125	230	126	40	DCSS	--	Y	Y	2	same as 62

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
64	127	195	128	45	DCSS	Viguiera lacineata & Adolphia californica	Y	Y	2	same as 62
65	129	240	130	55	DCSS	--	Y	Y	2	same as 62
66	131	65	132	230	DCSS	--	Y	Y	2	same as 62
67	133	260	134	60	DCSS	--	Y	Y	2	same as 62
68	135	70	136	275	DCSS	--	Y	Y	2	Existing shrub cover is generally 40 to 60 percent and portions occur on slopes greater than 50 percent. Portions of this area contain impenetrable stands of lemonadeberry with 100 percent cover. Cover should be reduced to less than 50 percent using the prioritization lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Although not sensitive, avoid cholla in the areas where it occurs.
69	137	80	138	245	DCSS	--	Y	Y	2	same as 68
70	139	95	140	290	DCSS	--	Y	Y	2	same as 68
71	141	85	142	275	DCSS	--	Y	Y	2	same as 68
72	143	135	144	250	DCSS	--	Y	Y	3	same as 68
73	145	95	146	270	DCSS	--	Y	Y	2	same as 68
74	147	345	148	130	DCSS	--	Y	Y	2	same as 68
75	149	15	150	245	DCSS	--	N	Y	2	same as 68
76	151	5	152	205	DCSS	--	Y	Y	2	same as 68
77	153	270	154	100	DCSS	--	Y	Y	2	same as 68
78	155	240	156	75	DCSS	--	Y	Y	3	same as 68
79	157	335	158	175	DCSS	--	Y	Y	2	same as 68
80	159	40	160	255	DCSS	--	Y	Y	3	same as 68
81	161	45	162	235	DCSS	--	Y	Y	3	same as 68
82	163	45	164	260	DCSS	--	Y	Y	2	same as 68

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
83	165	60	166	275	DCSS	--	Y	Y	2	Existing shrub cover is generally 40 to 70 percent. Shrub cover needs to be reduced to 50 percent cover by first removing invasive species (e.g., tree tobacco), then other non-native species (e.g., non-native succulents), followed by flammable native species, then other native species. Although not sensitive, avoid cholla in the areas where it occurs. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
84	167	65	168	285	DCSS	--	N	Y	2	same as 83
85	169	90	170	265	DCSS	--	N	Y	2	same as 83
86	171	95	172	315	DCSS	--	N	Y	2	same as 83
87	173	90	174	280	DCSS	--	N	Y	2	same as 83
88	175	145	176	335	DCSS	--	Y	Y	2	same as 83
89	177	190	178	355	DCSS	--	Y	Y	2	same as 83; a patch of pepper trees occurs within the brush management area; trees need to be limbed-up to 6 times the shrub height or to 6' from the ground, whichever is greater. Trees will need to be removed and their canopies trimmed in some areas to obtain the required 40' maximum canopy mass with 30' horizontal separation distance.
90	179	195	180	20	DCSS	--	Y	Y	2	same as 83
91	181	220	182	45	DCSS	--	Y	Y	2	same as 83; stairs and balcony present; a patch of pine trees occurs within the brush management area; trees need to be limbed-up to 6 times the shrub height or to 6' from the ground, whichever is greater. Trees will need to be removed and their canopies trimmed in some areas to obtain the required 40' maximum canopy mass with 30' horizontal separation distance.
92	183	95	184	285	DCSS	--	Y	Y	2	same as 83
93	185	200	186	30	DCSS	--	Y	Y	2	same as 83; several patches of non-native trees occur within the brush management area; trees need to be limbed-up to 6 times the shrub height or to 6' from the ground, whichever is greater. Trees will need to be removed and their canopies trimmed in some areas to obtain the required 40' maximum canopy mass with 30' horizontal separation distance.

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
94	187	350	188	195	DCSS + EW	--	N	Y	3	This small EW contains mature eucalyptus trees with overlapping canopies and a mix of native and non-native shrubs in the understory. Existing shrub cover in the understory is approximately 60 percent. Eucalyptus trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 30' horizontal separation distance. Thin shrubs to no more than 50 percent cover using the prioritization lists provided. Where shrubs remain under eucalyptus canopies, limb-up eucalyptus trees to 3 times the shrub height or 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).
95	189	80	190	270	DCSS + EW	--	N	Y	2	same as 94
96	191	95	192	265	DCSS	--	N	Y	2	Existing shrub cover is generally 40 to 70 percent. Thin shrubs to no more than 50 percent cover using the prioritization lists provided (avoid <i>Viguiera laciniata</i> where possible). Although not sensitive, avoid cholla in the areas where it occurs. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. Portions of this area contain nearly impenetrable stands of lemonadeberry. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
97	193	155	194	320	DCSS	<i>Viguiera lacineata</i>	N	Y	3	same as 96; approximately 50 sensitive <i>Viguiera lacineata</i> are present and should not be removed.
98	195	20	196	215	DCSS	--	N	Y	2	same as 96

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
99	197	70	198	280	EW	--	N	Y	2	This small EW contains mature eucalyptus trees with overlapping canopies. Very few shrubs are present in the the understory (shrub cover is well below 50 percent). Eucalyptus trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 10' horizontal separation distance. Limb-up eucalyptus trees to 3 times the shrub height or 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).
100	199	90	200	270	DCSS	--	Y	Y	2	Existing shrub cover is generally 40 to 70 percent and portions occur on slopes greater than 50 percent. Shrub cover needs to be reduced to 50 percent cover by first removing invasive species, then other non-native species, followed by flammable native species, then other native species. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. Several non-native trees (eucalyptus) occur within this area and need to be limbed-up to 6 times the shrub height or to 6' from the ground, whichever is greater (they occur on slopes greater than 50 percent). All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
101	201	100	202	270	DCSS	--	Y	Y	2	same as 100
102	203	75	204	245	DCSS	--	N	Y	3	same as 100
103	205	65	206	245	DCSS	--	N	Y	2	same as 100
104	207	50	208	210	DCSS	--	Y	Y	3	same as 100
105	209	65	210	205	DCSS	--	Y	Y	3	same as 100
106	211	20	212	160	EW	--	Y	N	3	same as 100
107	213	120	214	295	DCSS	Viguiera lacineata	N	Y	2	same as 100

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
108	215	285	216	70	DCSS	Viguiera lacineata & Ferocactus viridens	Y	Y	2	same as 100
109	217	50	218	210	DCSS	Viguiera lacineata & Ferocactus viridens	N	Y	2	same as 100
110	219	230	220	55	DCSS	--	N	Y	2	same as 100
111	221	295	222	110	DCSS	Viguiera lacineata & Ferocactus viridens	N	Y	2	same as 100
112	223	290	224	95	DCSS	Viguiera lacineata	Y	Y	2	same as 100
113	225	170	226	340	DCSS	--	N	Y	2	This small DCSS contains existing shrub cover greater than 50 percent. Cover should be reduced to less than 50 percent using the prioritization lists provided. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
114	227	350	228	170	DCSS	--	N	Y	2	

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
Marion Bear Subarea										
115	229	225	230	40	NNV	--	N	N	1	This slope is comprised of hottentot fig (<i>Carpobrotus edulis</i>) as groundcover. A small portion of this area (near GPS point 116) contains an encroachment of fruit trees with overlapping canopies. Fruit trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 10' horizontal separation distance.
116	231	240	232	50	NNV	--	N	N	2	same as 115
117	233	265	234	40	NNV	--	N	N	2	same as 115
118	235	320	236	70	DCSS	--	N	Y	2	Existing shrub cover is generally 40 to 70 percent. Shrub cover needs to be reduced to 50 percent cover by first removing invasive species, then other non-native species, followed by flammable native species, then other native species. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
119	237	310	238	130	DCSS	--	N	Y	2	same as 118
120	239	325	240	165	DCSS + NNV	--	N	Y	2	same as 118
121	241	335	242	150	DCSS	--	N	Y	2	same as 118
122	243	160	244	345	DCSS	--	N	Y	2	same as 118
123	245	330	246	160	NNV	--	N	N	1	This small NNV is comprised almost entirely of hottentot fig as groundcover. There are also scattered non-native trees that occur in this area (shrubs are absent under trees). Non-native trees need to be limbed-up 6' from the ground.
124	247	225	248	20	DCSS	--	N	Y	2	same as 118
125	249	230	250	130	DCSS	--	N	Y	2	same as 118
126	251	350	252	155	DCSS	--	N	Y	2	same as 118
127	253	125	254	20	DCSS + NNV	--	N	Y	2	same as 118
128	255	170	256	335	DCSS	--	N	Y	2	same as 118
129	257	330	258	185	DCSS	--	N	Y	2	same as 118
130	259	40	260	245	NNV	--	N	N	2	same as 123
131	261	250	262	125	DCSS + NNV	--	N	Y	2	same as 118
132	263	270	264	55	DCSS	--	N	N	3	same as 118

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations	
133	265	325	266	185	DCSS	--	N	Y	2	same as 118	
134	267	225	268	15	DCSS	--	N	Y	2	same as 118	
135	269	95	270	285	DCSS + EW	--	N	N	3	This small EW contains mature eucalyptus and other non-native trees with overlapping canopies and a mix of native and non-native shrubs in the understory. Existing shrub cover in the understory is approximately 60 percent. Eucalyptus trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 10' horizontal separation distance. Thin shrubs to no more than 50 percent cover using the prioritization lists provided. Where shrubs remain under eucalyptus canopies, limb-up eucalyptus trees to 3 times the shrub height or 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).	
136	271	130	272	300	DCSS	--	N	Y	2		same as 118
137											
138											
139											

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
Serra Mesa Subarea										
140	279	240	280	145	NNV	--	N	N	2	This small NNV contains a mixture of non-native ornamental trees. The understory contains non-native species (shrub cover is well below 50 percent). Trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 10' horizontal separation distance. Limb-up trees to 3 times the shrub height or 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).
141	281	240	282	55	NNG	--	N	N	2	This small NNG contains a mixture of non-native grasses and mustard. Several shrubs are present but are less than 2 feet in height. Some non-native tree canopy extends into the brush management zone (from adjacent residences); canopy mass is less than 40' and canopies are spaced greater than 10'. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).
142	283	245	284	60	NNG	--	N	N	2	same as 141
143	285	240	286	65	DCSS-d	Viguiera lacineata	N	Y	2	Existing shrub cover is generally 40 to 70 percent. Shrub cover needs to be reduced to 50 percent cover by first removing invasive species, then other non-native species, followed by flammable native species, then other native species. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
144	287	65	288	240	DCSS-d	Ferocactus viridens	N	Y	2	same as 143

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
145	289	55	290	240	DCSS-d	Viguiera lacineata & Ferocactus viridens	Y	Y	2	same as 143
146	291	80	292	330	DCSS-d	Viguiera lacineata & Ferocactus viridens	Y	Y	2	same as 143
147	293	340	294	160	DCSS-d	Ferocactus viridens	Y	Y	2	same as 143
148	295	5	296	170	DCSS-d	--	Y	Y	2	same as 143
149	297	340	298	170	DCSS-d	--	N	Y	2	same as 143
150	299	340	300	160	DCSS-d	--	N	Y	2	same as 143
151	301	10	302	170	DCSS + NNV	--	N	Y	DCSS = 2 NNV = 1	same as 143
152	303	20	304	175	DCSS-d	--	N	Y	2	same as 143
153	305	20	306	200	NNV	--	N	N	1	This portion of the slope is comprised of hottentot fig (Carpobrotus edulis) as groundcover (herbs, shrubs, and trees are absent). This area is considered to be in compliance.
154	307	20	308	200	NNV	--	N	N	1	same as 153
155	309	25	310	210	DCSS-d	--	Y	Y	2	same as 143
156	311	30	312	195	DCSS + NNV	--	Y	Y	DCSS = 2 NNV = 1	same as 143

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
157	313	245	314	60	NNV	--	N	N	1 and 2	The outer portion of this brush management area is considered to be in compliance because it is comprised of hottentot fig (<i>Carpobrotus edulis</i>) as groundcover (herbs, shrubs, and trees are absent). The portion of this brush management area closest to homes contains non-native ornamental trees. Where tree canopies overlap, trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 10' horizontal separation distance. Limb-up trees to 3 times the shrub height or 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).
158	315	230	316	70	NNV	--	N	N	1 and 2	same as 157
159	317	240	318	50	NNV	--	Y	N	1 and 2	same as 157
160	319	240	320	70	DCSS + NNV	--	Y	Y	2	Existing shrub cover in the DCSS areas is generally 30 to 60 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
161	321	220	322	65	DCSS + NNV	--	Y	Y	2	same as 160
162	323	355	324	170	DCSS + NNV	--	Y	N	1	same as 160
163	325	310	326	140	DCSS-d	--	Y	Y	2	same as 160
164	327	70	328	280	DCSS-d	--	Y	Y	2	same as 160
165	329	60	330	260	DCSS-d	--	Y	Y	2	same as 160

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
166	331	255	332	200	NNV	--	N	N	2	This small NNV contains a mixture of non-native ornamental trees and a mix of native and non-native shrubs in the understory. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 10' horizontal separation distance. Limb-up trees to 3 times the shrub height or 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).
167	333	210	334	20	NNV	--	Y	N	1	This portion of the slope is comprised of hottentot fig (<i>Carpobrotus edulis</i>) as groundcover (herbs, shrubs, and trees are absent). This area is considered to be in compliance.
168	335	310	336	30	CSCS + NNV	--	Y	Y	CSCS = 3 NNV = 1	Existing shrub cover in the CSCS is generally 50 to 80 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
169	337	130	338	280	CSCS	--	Y	Y	3	same as 168
170	339	170	340	25	DCSS-d	--	Y	Y	2	Existing shrub cover in the DCSS is generally 30 to 60 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
171	341	355	342	160	DCSS + NNV	CAGN	Y	Y	DCSS = 2 NNV = 1	same as 170

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
172	343	255	344	90	DCSS-d	--	N	Y	2	same as 170
173	345	160	346	280	DCSS + DH	--	N	Y	DCSS = 2 DH = 1	This DCSS area may be a revegetation area associated with SDG&E's transmission towers. The DCSS is a dense stand of California sagebrush (approximately 90 percent cover). Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dirt access roads and transmission tower footings and are considered to be in compliance.
174	347	80	348	260	DCSS-d	CAGN	N	Y	2	same as 170
175	349	160	350	340	DCSS	--	N	Y	2	Existing shrub cover is generally 50 to 80 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
176	351	290	352	160	DCSS	--	N	Y	3	same as 175
177	353	330	354	140	DCSS	--	N	Y	3	same as 175
178	355	330	356	140	DCSS	--	N	Y	3	same as 175
179	357	350	358	165	DCSS-d	--	Y	Y	2	Existing shrub cover is generally 30 to 60 percent (portions have shrub cover near 80 percent). Shrub cover needs to be reduced to 50 percent cover using the priority lists provided (avoid San Diego barrel cactus). Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
180	359	145	360	330	DCSS-d	--	Y	Y	2	same as 179
181	361	325	362	160	DCSS-d	--	Y	Y	2	same as 179
182	363	330	364	150	DCSS-d	Ferocactus viridens	Y	Y	2	same as 179

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
183	365	160	366	310	DCSS + EW	--	Y	Y	3	same as 179; a portion of this area contains a stand of eucalyptus woodland (mix of mature eucalyptus and other non-native trees) with overlapping canopies. A mix of native and non-native shrubs in the understory. Existing shrub cover in the understory is approximately 60 percent. Eucalyptus trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 30' horizontal separation distance. Thin shrubs to no more than 50 percent cover using the prioritization lists provided. Where shrubs remain under eucalyptus canopies, limb-up eucalyptus trees to 6 times the shrub height or 6' from the ground, whichever is greater.
184	367	165	368	5	DCSS-d	--	Y	Y	3	same as 179
185	369	10	370	130	DCSS-d	--	Y	Y	3	same as 179
186	371	165	372	340	DCSS-d	--	Y	Y	2	same as 179
187	373	160	374	340	DCSS-d	--	Y	Y	2	same as 179
188	375	170	376	335	DCSS-d	--	Y	Y	2	same as 179
189	377	170	378	350	DCSS-d	--	Y	Y	2	same as 179
190	379	5	380	205	DCSS-d	--	Y	Y	2	same as 179
191	381	20	382	220	DCSS-d	--	Y	Y	2	same as 179
192	383	10	384	170	DCSS-d	--	Y	Y	2	same as 179
193	385	330	386	140	DCSS-d	--	Y	Y	2	same as 179
194	387	10	388	185	DCSS-d	--	Y	Y	2	same as 179
195	389	185	390	330	DCSS	--	Y	Y	2	same as 179
196	391	260	392	80	DCSS	Ferocactus viridens	N	Y	2	same as 179
197	393	75	394	250	DCSS-d	Ferocactus viridens	N	Y	2	Existing shrub cover is generally 30 to 60 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided (avoid San Diego barrel cactus). Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance.
198	395	310	396	150	DCSS-d + NNV	--	Y	Y	2	same as 197
199	397	340	398	150	DCSS-d + NNV	--	Y	Y	2	same as 197

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
200	399	140	400	330	DCSS-d + NNV	--	Y	Y	2	same as 197
201	401	160	402	330	DCSS-d	--	Y	Y	2	same as 197
202	403	340	404	190	DCSS + NNV	--	N	Y	2	Existing shrub cover is generally 60 to 70 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. The portion of the brush management zone adjacent to homes contains hottentot fig (<i>Carpobrotus edulis</i>), non-native grasses, and herbaceous species. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
203	405	10	406	200	DCSS-d + NNV	--	N	Y	2	Existing shrub cover is generally 30 to 60 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). A brow ditch runs through the center of this area. The portion of the brush management zone between the brow ditch and residences contains a dense mat of hottentot fig (<i>Carpobrotus edulis</i>); this area is considered to be in compliance.
204	407	160	408	325	DCSS-d + NNV	--	Y	Y	2	same as 203
205	409	345	410	170	DCSS-d + NNV	--	N	Y	2	same as 203
206	411	340	412	170	DCSS-d + NNV	--	N	Y	2	same as 203
207	413	350	414	160	DCSS-d + NNV	--	N	Y	2	same as 203
208	415	330	416	160	DCSS-d + NNV	--	N	Y	2	same as 203
209	417	70	418	350	DCSS-d + NNV	--	N	Y	2	same as 203
210	419	260	420	130	DCSS-d + NNV	--	N	Y	2	same as 203

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
211	421	330	422	160	DCSS-d + NNV	--	N	Y	2	same as 203
212	423	185	424	350	DCSS-d + NNV	--	N	Y	2	same as 203
213	425	355	426	185	NNG	--	N	N	2	This small NNG contains a mixture of non-native grasses and mustard. t but are less than 2 feet in height. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height). The portion of the brush management zone between the brow ditch and residences contains a mix hottentot fig (Carpobrotus edulis) and non-native grasses.
Cowles Mountain Subarea										
214	427	285	428	205	DCSS	--	N	Y	2	Existing shrub cover is generally 30 to 80 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided (avoid San Diego County viguiera). Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain areas of non-native vegetation, such as oleander and myoporum). Non-native trees should be limbed up to 3 times the shrub height or 6 feet, whichever is greater.
215	429	290	430	110	DCSS	--	N	Y	2	same as 214
216	431	200	432	5	DCSS	Viguiera lacineata	N	Y	2	same as 214
217	433	0	434	190	DCSS	--	N	Y	2	same as 214
218	435	165	436	320	DCSS	Viguiera lacineata	N	Y	2	same as 214
219	437	340	438	130	DCSS + NNV	--	N	Y	2	same as 214
220	439	330	440	150	DCSS	Viguiera lacineata	N	Y	2	same as 214
221	441	320	442	140	DCSS	--	N	Y	2	same as 214
222	443	300	444	120	DCSS	Viguiera lacineata	N	Y	2	same as 214

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
223	445	320	446	130	DCSS	Viguiera lacineata	N	Y	2	same as 214
224	447	300	448	120	DCSS	Viguiera lacineata	N	Y	2	same as 214
225	449	130	450	290	DCSS	Viguiera lacineata	N	Y	2	same as 214
226	451	130	452	310	DCSS	--	N	Y	2	same as 214
227	453	130	454	10	DCSS + NNV	--	N	Y	2	same as 214
228	455	290	456	180	DCSS	Viguiera lacineata	N	Y	2	same as 214
229	457	90	458	250	DCSS + NNV	Viguiera lacineata	N	Y	2	same as 214
230	459	260	460	90	DCSS	--	N	Y	2	same as 214
231	461	280	462	105	DCSS	--	N	Y	2	same as 214
232	463	105	464	330	DCSS	--	N	Y	2	same as 214
233	465	320	466	180	DCSS	--	N	Y	2	same as 214
234	467	315	468	145	DCSS	Viguiera lacineata	N	Y	2	same as 214
235	469	330	470	160	DCSS	--	N	Y	2	same as 214
236	471	165	472	60	DCSS	--	N	Y	3	Existing shrub cover is generally 20 to 70 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided (avoid San Diego County viguiera). Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain areas of non-native vegetation (scattered eucalyptus and acacia trees). Non-native trees should be limbed up to 3 times the shrub height or 6 feet, whichever is greater.
237	473	30	474	230	DCSS	Viguiera lacineata	N	Y	1	same as 236
238	475	40	476	230	DCSS	Viguiera lacineata	N	Y	1	same as 236
239	477	350	478	200	DCSS	Viguiera lacineata	N	Y	1	same as 236
240	479	5	480	190	DCSS	--	N	Y	1	same as 236
241	481	5	482	190	DCSS	--	N	Y	2	same as 236

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
242	483	10	484	190	DCSS	--	N	Y	1	same as 236
243	485	40	486	205	DCSS	--	N	Y	1	same as 236
244	487	230	488	60	DCSS	--	N	Y	3	same as 236
245	489	60	490	250	DCSS + NNV	--	N	Y	3	same as 236
246	491	0	492	250	DCSS + NNV	--	N	Y	2	same as 236
247	493	60	494	210	DCSS	--	N	Y	2	same as 236
248	495	80	496	250	DCSS + NNV	--	N	Y	2	same as 236
249	497	90	498	280	DCSS	--	N	Y	2	same as 236
250	499	210	500	30	DCSS	--	N	Y	2	same as 236
251	501	220	502	100	DCSS	--	N	Y	2	same as 236
252	503	210	504	20	DCSS	Viguiera lacineata	N	Y	2	same as 236
253	505	180	506	30	DCSS	--	N	Y	2	same as 236
254	507	210	508	30	DCSS	Viguiera lacineata	N	Y	2	same as 236
255	509	20	510	210	DCSS	--	N	Y	2	same as 236
256	511	290	512	205	DCSS	Viguiera lacineata	N	Y	2	same as 236
257	513	35	514	205	DCSS	--	N	Y	2	same as 236
258	515	30	516	210	DCSS	Viguiera lacineata	Y	Y	2	same as 236
259	517	30	518	230	DCSS	Viguiera lacineata	Y	Y	2	same as 236
260	519	200	520	20	DCSS	--	Y	Y	2	same as 236
261	521	210	522	30	DCSS	--	N	Y	2	same as 236
262	523	15	524	200	DCSS	--	N	Y	2	same as 236
263	525	200	526	40	DCSS-d + NNV	--	N	Y	2	same as 236
264	527	210	528	35	DCSS-d + NNV	--	N	Y	2	same as 236
265	529	20	530	220	DCSS-d + NNV	--	N	Y	2	same as 236

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*	Photo Point B (compass direction)*	Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations		
Encanto Subarea										
266	531	240	532	45	DCSS	Viguiera lacineata	N	Y	2	Existing shrub cover is generally 30 to 70 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided (avoid San Diego County viguiera). Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
267	533	260	534	40	DCSS	Viguiera lacineata	N	Y	2	same as 266
268	535	250	536	85	DCSS-d	Viguiera lacineata	N	Y	2	same as 266
269	537	235	538	50	DCSS-d	--	N	Y	2	same as 266
270	539	235	540	55	DCSS-d	--	N	Y	2	same as 266
271	541	205	542	40	DCSS	--	N	Y	2	same as 266
272	543	270	544	325	NNG	--	N	N	1	This small NNG contains a mixture of non-native grasses and herbs. At the time of the data collection, all grasses and herbs were less than 2-inches in height. Therefore this area is considered to be in compliance.
273	545	40	546	210	DCSS	Viguiera lacineata	N	Y	2	Existing shrub cover in this small DCSS is slightly greater than 50 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided (avoid San Diego County viguiera). Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
274	547	0	548	170	DCSS	--	N	Y	2	Existing shrub cover in this small DCSS is generally 60 to 80 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
275	549	50	550	100	DCSS	--	N	Y	2	Existing shrub cover ranges from 20 to 70 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Scattered non-native trees (eucalyptus and pepper trees) occur within the brush management area. Trees should be limbed up to 3 times the shrub height or 6 feet from the ground, whichever is greater.
276	551	230	552	70	DCSS	--	N	Y	3	same as 275
277	553	235	554	60	DCSS	--	N	Y	2	same as 275
278	555	70	556	240	DCSS	--	N	Y	2	same as 275
279	557	280	558	160	DCSS + NNV	--	Y	Y	2 - DCSS 1 - NNV	Existing shrub cover is generally 30 to 60 percent. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Portions of the brush management zone contain dense mats of hottentot fig (<i>Carpobrotus edulis</i>) and are considered to be in compliance. Scattered non-native trees (eucalyptus, pepper, acacia, and pine trees) occur within the brush management area. On slopes greater than 50 percent, limb-up trees to 6 times the shrub height or 6' from the ground, whichever is greater. On slopes less than 50 percent, limb-up trees to 3 times the shrub height or 6 feet from the ground, whichever is greater.
280	559	265	560	50	DCSS	--	Y	Y	2	same as 279
281	561	270	562	70	DCSS	--	Y	Y	2	same as 279
282	563	260	564	80	DCSS	--	Y	Y	2	same as 279
283	565	280	566	90	DCSS + EW	--	Y	Y	3	same as 279
284	567	265	568	70	DCSS	--	Y	Y	2	same as 279
285	569	250	570	70	DCSS-d	--	Y	Y	2	same as 279
286	571	235	572	45	DCSS-d	--	N	Y	2	same as 279
287	573	220	574	60	DCSS	--	N	Y	2	same as 279

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
288	575	250	576	70	DCSS	--	N	Y	2	same as 279
289	577	55	578	320	DCSS + NNV	--	N	Y	2	same as 279
290	579	260	580	70	DCSS	--	N	Y	2	same as 279
291	581	80	582	230	DCSS	--	N	Y	3	same as 279
292	583	10	584	210	DCSS	--	N	Y	3	same as 279
293	585	345	586	80	DCSS	--	N	Y	2	Existing shrub cover is generally less than 50 percent, except to the south of GPS point 295. Shrub cover needs to be reduced to 50 percent cover using the priority lists provided. Remaining shrubs need to be pruned and limbed up to achieve umbrella shaping. Grasses and herbs greater than 2 inches in height are present throughout this area. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height).
294	587	355	588	160	DCSS-d	--	N	Y	2	same as 293
295	589	170	590	345	DCSS-d	--	N	Y	2	same as 293
296	591	340	592	150	DCSS	--	N	Y	2	same as 293
297	593	320	594	150	DCSS-d	--	N	Y	2	same as 293
298	595	260	596	140	NNV	--	Y	N	2	This small NNV contains a mix of pepper trees with non-native grasses in the understory. Trees need to be removed and their canopies trimmed to obtain the required 40' maximum canopy mass with 30' horizontal separation distance. Limb-up trees to 6 times the shrub height or 6' from the ground, whichever is greater. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height* can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (*no native herbs should be cut if under 2-ft in height).

Appendix C - Del Cerro Existing Conditions Site Evaluation Forms and Recommendations

GPS Point	Photo Point A (compass direction)*		Photo Point B (compass direction)*		Habitat	Sensitive Species	Slope >50 percent	Potential CAGN Habitat	Brush Management Compliance	Notes/Recommendations
299	597	130	598	330	DCSS	Viguiera lacineata	Y	Y	2	Existing shrub cover in this small DCSS is approximately 20 percent. Grasses and herbs are prevalent in this area. All grasses (i.e., native and non-native) and all non-native herbs must be reduced to 2-inches in height; all native herbs and/or selected individual clumps of grass greater than 2-ft in height** can be retained when they are isolated from other fuels and/or when necessary for soil stabilization to prevent erosion (**no native herbs should be cut if under 2-ft in height). Avoid San Diego County viguiera where it occurs.
300	599	70	600	250	NNG	--	Y	N	1	This small NNG contains a mixture of non-native grasses and herbs. At the time of the data collection, all grasses and herbs were less than 2-inches in height. Therefore this area is considered to be in compliance.

Habitat Codes

EW = eucalyptus woodland

DCSS = Diegan coastal sage scrub

DCSS-d = Diegan coastal sage scrub - disturbed

CSCS = coastal sage-chaparral scrub

NNG = non-native grassland

NNV = non-native vegetation

DH = disturbed habitat

DEV = developed

Brush Management Compliance Rankings

1 = entire brush management area is in compliance

2 = needs moderate thinning

3 = needs significant thinning

* Compass directions are measured in degrees